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retail jewelers

Place:

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Date:

1931

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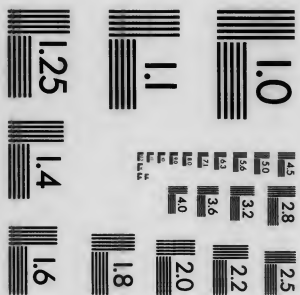
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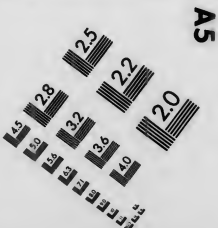
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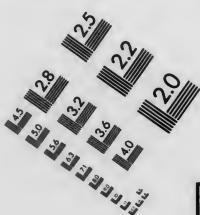
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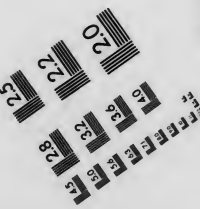
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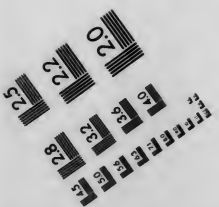
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**JEWELRY DISTRIBUTION BY  
RETAIL JEWELERS**



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Domestic Commerce Series—No. 48

## JEWELRY DISTRIBUTION BY RETAIL JEWELERS



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WASHINGTON : 1931

For sale by the Superintendent of Documents, Washington, D. C. - - - Price 10 cents



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## FOREWORD

This survey of the retail jewelry business was undertaken by the Department of Commerce at the solicitation and with the cooperation of the American National Retail Jewelers' Association. A special questionnaire committee of the association was appointed to cooperate with representatives of the Department in formulating definite plans for the work. The members of that committee were as follows:

Charles Hammarstrom, Marcus & Co., New York, N. Y., chairman.  
Edward F. Herschede, Frank Herschede Co., Cincinnati, Ohio.  
William G. Thurber, Tilden, Thurber & Co., Providence, R. I.  
James Kingman, Smith-Patterson Co., Boston, Mass.  
Percy Loud, Wright, Kay & Co., Detroit, Mich.  
A. J. Sundlun, A. Kahn & Co., Washington, D. C.  
Norman E. Hascall, J. J. Freeman Co., Toledo, Ohio.  
H. R. Avery, Webb C. Ball Co., Cleveland, Ohio.  
Simon Linz, Linz Bros., Dallas, Tex.  
Emil J. Scheer, Rochester, N. Y.  
Walter Jaccard, Jaccard Jewelry Corp., Kansas City, Mo.  
Charles T. Evans, Secretary, American National Retail Jewelers' Association, New York, N. Y.

As a result of conferences, the work was assigned to what was then known as the Domestic Commerce Division of the Bureau of Foreign and Domestic Commerce. That division was later reorganized, the division having responsibility for this survey being designated the Merchandising Research Division. A research specialist, George P. Carl, was secured and paid by the association to conduct the work. The association bore the expense of printing the questionnaires used, while the Department of Commerce supplied facilities for mail service, correspondence, statistical work, and other details incident to the conduct of the survey.

This is one of a series of publications on jewelry distribution. The first report on distribution by manufacturers of medium and low priced jewelry was issued in mimeograph form. The third, which covers wholesale jewelry distribution, is now being prepared. These studies are in line with the efforts of the Bureau of Foreign and Domestic Commerce to place in the hands of American business men facts which will enable them to combat the wastes in our distribution system.

In this survey no effort has been made to present suggestions involving any matters of preferred policy or best procedure in the conduct of a retail jewelry store. It is believed that individual jewelers will be able to draw their own conclusions from the facts and to formulate policies and methods which will prove helpful to individual stores and the trade in general.

WILLIAM L. COOPER, *Director,*  
*Bureau of Foreign and Domestic Commerce.*

JUNE, 1931.

IV

## JEWELRY DISTRIBUTION BY RETAIL JEWELERS

### METHOD OF SURVEY

#### SELECTION OF STORES

Every effort was made to secure a representative group of stores for the study. First, a mailing list was prepared which included all members of the American National Retail Jewelers' Association. Approximately 3,000 stores of all sizes, distributed throughout the country in all but two States, were represented in this group. This list was supplemented by a second one, including approximately 2,000 stores not members of the association, distributed among all of the States.

The two lists were then checked against the total number of outlets classified under "Jewelry" in a current issue of a reliable directory of retail outlets for each State and the entire country. It was found that the stores on the two lists represented approximately 25 per cent of the total number of retail jewelry outlets listed in the directory. A detailed study of the list by States showed that some States had received a representation in excess of 25 per cent, while others were considerably below that figure. Since it was desired to give approximately equal representation among States, on a percentage basis, a third list of stores was prepared to equalize the representation. This third list of stores numbered about 1,100. The three lists, taken together, when finally checked to eliminate duplication, embraced 6,084 stores, representing approximately 30 per cent of the total number of retail jewelry stores in the country and approximately that proportion of the total in each of the States.

Questionnaires were sent to those 6,084 stores, and responses of one kind or another were received from 1,859. Because of scanty information and omission of important data rendering them unsuitable for purposes of comparison, many replies were discarded, leaving 1,259 which were used in the analysis. Even in this finally selected group certain important items of information were sometimes omitted. However, in each instance a sufficient amount of significant information was given to justify the inclusion of the return.

Cooperation of the stores circularized was, generally speaking, very gratifying. Nearly 31 per cent of the stores which received questionnaires responded in one way or another; usable returns were received from a little over 20 per cent.

In view of the fact that the questionnaire was an unusually long and complicated one, this percentage of usable return is exceptionally high, as compared with results usually achieved in nation-wide

studies of this kind. It may be ascribed both to the general cooperative spirit of the jewelers approached, and to a carefully planned scheme of follow-up work. This latter was done by sending out two special circular letters from Washington and through cooperation of the various district offices of the Bureau of Foreign and Domestic Commerce. In some instances local chambers of commerce, State jewelry associations, and even individuals cooperated with district offices in this final phase of the work.

The response by States, based on usable returns, varied from 6 per cent to 39 per cent, the highest percentage of usable return being from the State of Washington. The more populous States, of course, supplied greater numbers of returns than the less populous ones; although, on a relative or percentage basis, the degree of return was about the same. The State of New York supplied 129 usable returns, Illinois came second with exactly 100, Pennsylvania third with 95, California fourth with 78, and Ohio next with 77. Every State was represented in the finally selected group of returns, as were the District of Columbia and Alaska.

For purposes of convenience, in drawing certain comparisons, States were grouped into nine geographic subdivisions. In a few instances figures have been presented for individual States. The possibilities of setting forth data in such a manner, of course, were limited, because the number of returns received from most States was not sufficiently great to justify that method of presentation, particularly where any comparisons might be drawn with other States.

The nine geographic subdivisions were as follows:

New England: Connecticut, Maine, Massachusetts, New Hampshire, Rhode Island, Vermont.  
Central Atlantic: Delaware, District of Columbia, Maryland, New Jersey, New York, Pennsylvania, Virginia, West Virginia.  
Midwest: Illinois, Indiana, Iowa, Kentucky, Michigan, Ohio, Wisconsin.  
Southeast: Alabama, Florida, Georgia, Mississippi, North Carolina, South Carolina, Tennessee.  
Gulf Southwest: Arkansas, Louisiana, Missouri, Oklahoma, Texas.  
West Midcontinent: Colorado, Kansas, Nebraska, Wyoming.  
Central Northwest: Minnesota, Montana, North Dakota, South Dakota.  
Pacific Northwest: Alaska, Idaho, Oregon, Washington.  
Pacific Southwest: Arizona, California, Nevada, New Mexico, Utah.

It will be noted, on studying the tables presented in this report, that there is a considerable variation in the number of stores reporting on various items, even of a related character. This condition arises through the fact that not all stores reported on all items. Thus, while 1,243 stores gave a record of net sales for 1929, only 1,089 of them gave a record for both 1929 and 1928. In like manner, there is a variation in the number of stores reporting on store location. Store location was provided for under three categories—"district," "street," and "downstairs or upstairs." An examination of the questionnaires shows that 1,050 reported the district, 1,083 reported the street, while 1,259 stores reported whether downstairs or upstairs. Many similar instances will be found at various points in the report.

Where comparisons have been drawn between kinds or groups of stores, or between one year and another, care has been taken to see that identical stores are used. In only two or three instances has this rule been violated; and, in each instance, this fact has been clearly stated. In one instance, as recorded in Table 18, comparisons

are drawn between net sales for 1929 and various years back to 1914. These comparisons, in each of the several year groups, are made among identical stores, even though the number of stores varies among the years. In this case, only 236 stores were able to give net sales figures for both 1929 and 1914; while 1,089 stores gave net sales data for both 1929 and 1928. The reliability of the percentage change figure, in this case, varies with the number of stores involved in the comparison. As a consequence, the comparison figures for 1929 and 1928 may be regarded as being more nearly reliable than those between 1929 and the years from 1927 back to 1924; while those figures, in turn, are more reliable than those for the years 1919 and 1914.

#### EXPLANATION OF STATISTICAL TERMS

Throughout this report frequent use has been made of certain statistical terms which may be unfamiliar to many readers, and which therefore require some explanation. These terms are as follows: Average, median, quartile, quartile point, and range.

The term "average" is used in its customary meaning—a value arrived at by totaling all of the separate items in a series of figures, and dividing by the number of items in the series. In statistical parlance this is known as the "mean."

The term "median" should be interpreted as meaning very much the same as the term "average." There is this distinction between the two terms, however; the average, as indicated previously, is arrived at by totaling all of the values in a series of figures, and then dividing by the number of items within that series; whereas the median is arrived at by arranging all of the items of a given series in order, from the lowest to the highest in value, and then counting halfway through the group from the bottom to the top, the exact middle item, or the value which is attached to it, representing the median.

It will be noticed that throughout the report the median is used much more frequently than the average in describing various factors treated in the statistical tables. The use of the median, rather than the average, as a measure of typical conditions or values is well justified. Very often the average is affected materially by unusually high or unusually low values in a series of figures. While it is true that, in a very comprehensive set of data, the average and the median may turn out to be identical, or nearly so, it happens very often that there is a great difference between the two and, in those instances, the median has been chosen as being more nearly representative of typical conditions.

A third term, sometimes used in connection with discussion of the statistical tables, is "quartile." This term may be interpreted, in most respects, in exactly the same fashion that the term "quarter" is commonly understood; that is to say, it represents one-fourth of the number of items in a series of figures or values, when arranged in order from the lowest to the highest and split into four groups.

In describing the data set forth in many of the tables the term "quartile point" is used. The quartile point is a value arrived at by counting through the values in a series of figures by quartile. For example, the first quartile point is that exactly one-fourth of the way upward from the lowest value in a series, the second quartile

point is exactly halfway through the series (this value, of course, is identical with the median, described in the preceding paragraph), while the third quartile point is exactly three-fourths of the way through the entire series. Thus, through study of the median along with the first and third quartile points, it is possible to determine the exact quartile—or quarter, in ordinary language—of a series of figures in which any given value belongs.

The term "range" is used merely to describe the length of a series of figures. This, of course, means giving the lowest value in the series and the highest. A typical example of the use of this term is to be found in describing the age of stores reporting in this survey; these stores varied in age from 1 year to 145 years; the range of this series of figures, therefore, is 1 to 145.

An example of the application of these various measures is to be found in Table 1, page 6. An inspection of this table shows that the range of annual net sales for 1,243 stores was from less than \$2,500 to more than \$1,000,000; the average annual net sales for this group of stores is \$66,264, the median value of annual net sales, however, is only \$24,663.

That is a typical example of the discrepancy which so often occurs when studying the average and median side by side. This particular discrepancy may be accounted for through the fact that the very large stores at the top end of the distribution, with the very large annual net sales, weight the figures very heavily on the upper end, in spite of the fact that they are relatively few in number as compared with the small stores at the lower end of the distribution. It is easy to understand how this may be, for one of these very large stores in the top group may be equivalent to 500 or more stores in the lowest group.

As a matter of fact, the average figure, in this case, is one which is reached or exceeded by only about 20 per cent of the stores in the group, whereas the average is customarily thought of as being a figure which is reached or exceeded by one-half of the individual items or values in a series. This point will be discussed in a little more detail in connection with the quartile point.

The first quartile point is given as \$12,331. This indicates that 25 per cent of the stores in the group did an annual business below that amount. The third quartile point is given as \$60,347, indicating that one-fourth of the stores did more than that much business during 1929. Studying these two quartile points in conjunction with the median value, \$24,663, it is possible to determine the range of the second quartile, and of the third quartile. A store doing a \$20,000 business would come in the second quartile, while one doing a \$50,000 business would come in the third quartile.

It has been pointed out that only about 20 per cent of the stores in this group reached or exceeded the average figure for the entire group. This fact may be determined with fair accuracy simply by inspection of the third quartile point and the average figure. The third quartile point shows that 25 per cent of the stores did an annual business in excess of \$60,347; the average figure is given as \$66,264. Since the average is higher than the third quartile point, it is obvious that less than 25 per cent of the stores did more than an average business. Actually, by detailed inspection of the figures, it is shown that only about 20 per cent of the stores exceeded the average.

In some instances, in describing the statistical material in the report, both average and median figures are given. This is made necessary because all comparisons of totals necessarily partake of the nature of an average figure. Sometimes, in order to get a true picture of the situation, it has been necessary to describe conditions first on one basis, and then on another. A case in point is one in which a comparison was made between net sales for 1929 and net sales for 1928 in a certain State. This particular State supplied 67 returns which gave net sales for each of the two years. A comparison of the total net sales for the two years showed a decrease of 1 per cent in 1929. However, of the 67 stores, only 28 indicated a decrease, while 39 reported an increase. Using a method of averages, that particular State showed a decrease in business; but, by determining the median percentage change among the 67 stores, an increase of over 1 per cent was indicated.

Insofar as possible, where two interpretations of the figures are practicable the results are shown in both ways. An example of this is to be found in Tables 14 and 15, pages 16 and 17, comparing net sales for 1,089 stores for the years 1928 and 1929.

In the one instance a decrease of 2.2 per cent is indicated when comparing 1929 with 1928. This figure is arrived at by comparing the total net sales for the two years and is, therefore, made on the basis of averages. In the other instance, there is indicated a decrease of 1.4 per cent; this figure is arrived at by arranging in order, from the lowest to the highest, the percentage of change for each one of the stores in the group, and then taking the median figure of that group. In this particular instance, there is not much difference between the two figures, and they both indicate the same general condition. However, it is conceivable that there might be a considerable difference, as described previously in connection with the comparison in one particular State.



## CHARACTERISTICS OF STORES

## SIZE OF STORES

In Table 1 data are given for 1,243 stores which reported net sales for 1929. The stores are grouped according to annual net sales, and each group's percentage of total stores, according to both total number and total net sales, is given. Inspection of the table shows that there were 31 stores which did an annual business of less than \$2,500. These 31 stores constituted 2.5 per cent of the total number of stores in the group, but they accounted for less than 0.1 per cent of the total net sales of all the stores considered in the table. At the upper end of the scale it will be noted that there were only seven stores which reported an annual business of \$1,000,000 or more; these stores constituted only 0.6 per cent of the total number of stores, but accounted for more than 11 per cent of the business done by all of the stores.

The average net sales for the group is shown to be \$66,264. This average figure, however, was actually reached or exceeded by only about 20 per cent of the total number of stores in the group. The median net sales (more nearly representative, as has been explained), amounted to \$24,663. This median figure represents the middle value when all stores are arranged from the lowest to the highest in net sales—the net sales of the six hundred twenty-second store, in that order. The first quartile point is given at \$12,331, indicating that one-fourth of the stores in the group reported annual net sales below that figure. The third quartile figure is \$60,347, indicating that one-fourth of the stores did an annual business in excess of that amount. The range of net sales, as indicated in the table, is from less than \$2,500 to over \$1,000,000.

TABLE 1.—DISTRIBUTION OF 1,243 STORES ACCORDING TO NET SALES IN 1929

Net sales groups	Stores		Net sales	
	Number	Per cent	Amount	Per cent
Less than \$2,500.....	31	2.5	\$54,400	0.1
\$2,500 to \$4,999.....	89	5.5	259,300	.3
\$5,000 to \$9,999.....	152	12.2	1,131,400	1.4
\$10,000 to \$24,999.....	378	30.4	6,275,000	7.6
\$25,000 to \$49,999.....	265	21.3	9,325,500	11.3
\$50,000 to \$99,999.....	180	14.5	12,361,800	15.0
\$100,000 to \$249,999.....	103	8.3	15,801,800	19.2
\$250,000 to \$499,999.....	36	2.9	12,452,700	15.1
\$500,000 to \$999,999.....	22	1.8	18,329,200	18.6
\$1,000,000 or more.....	7	.6	9,375,000	11.4
Total.....	1,243	100.0	\$2,366,100	100.0

Average net sales, \$66,264; first quartile, \$12,331; median, \$24,663; third quartile, \$60,347.

## SIZE OF CITY

Similarly, in Table 2 there is shown a distribution of stores according to size of city. Not all stores reported concerning the population of the place in which they are located, which accounts for the discrepancy between the total number of cases treated in this table and those treated in the preceding table.

Stores are classified in groups, according to the population of the town or city in which they are located, beginning with towns under 5,000, and running up to cities of 1,000,000 or more in population. The table shows that there are 252 stores located in towns under 5,000 in population; these stores constituted nearly 22 per cent of all those reporting in the total group, but accounted for less than 4 per cent of the total net sales of the group. Similarly, 123 stores are located in cities of 1,000,000 or more; these stores constituted less than 11 per cent of the total number of stores, but accounted for more than 25 per cent of the total net sales for the entire group. The median size of city is 31,470 population; the quartile points indicate that one-fourth of the stores are located in cities of less than 6,462 and one-fourth in cities larger than 145,761.

TABLE 2.—DISTRIBUTION OF 1,153 STORES BY SIZE OF CITY

Population	Stores		Net sales	
	Number	Per cent	Amount	Per cent
Less than 5,000.....	252	21.8	\$2,896,500	3.8
5,000 to 9,999.....	124	10.8	2,362,600	3.1
10,000 to 24,999.....	170	14.7	4,794,700	6.3
25,000 to 49,999.....	118	10.2	5,538,200	7.3
50,000 to 99,999.....	89	7.7	6,156,500	8.1
100,000 to 249,999.....	115	10.0	9,667,600	12.8
250,000 to 499,999.....	101	8.8	16,112,200	21.3
500,000 to 999,999.....	61	5.3	9,201,400	12.2
1,000,000 or more.....	123	10.7	18,965,100	25.1
Total.....	1,153	100.0	75,714,800	100.0

First quartile, 6,462 population; median, 31,470; third quartile, 145,761.

## STORE LOCATION

Store location was provided for in the questionnaire under three categories—district, street, and downstairs or upstairs. The accompanying table shows the manner in which stores reported on these three questions. It will be noted that the number of stores reporting varies throughout the three items. The data are presented with regard to both the number of stores and the percentage of stores in each section. In each case the percentage has been computed on the basis of the number of stores reporting on that particular item.

A study of the figures shows that nearly all of the stores are located in the central shopping district of their particular town or city. Exactly 5 per cent of them are located in suburban shopping districts, while a little less than 10 per cent are located in a neighborhood shopping section. Similarly, the majority of stores reported being located

on a main street; only a little over 12 per cent of the total number reported location on a side street. Only 40 stores, a little over 3 per cent of the entire group, reported an upstairs location.

TABLE 3.—DISTRIBUTION OF STORES WITH RESPECT TO STORE LOCATION

Classification	Number	Per cent
District:		
Central shopping district.....	897	85.4
Suburban shopping district.....	52	5.0
Neighborhood location.....	101	9.6
Total.....	1,050	100.0
Street:		
Main street.....	949	87.6
Side street.....	134	12.4
Total.....	1,083	100.0
Downstairs or upstairs:		
Downstairs.....	1,219	96.8
Upstairs.....	40	3.2
Total.....	1,259	100.0

## CHARACTER OF TRADE SERVED

Eight classifications were provided in the questionnaire by means of which the character of the trade served by the store could be indicated. This was to be done by checking; those classifications of outstanding importance in the store's trade to be checked twice, those of secondary importance to be checked once, and those of little or no importance not to be checked at all. The accompanying table shows the manner in which 1,228 stores reported on these items.

The table shows that 548 stores indicated the agricultural population as being of little or no importance in the trade served, 410 stores reported the agricultural population to be of secondary importance, while 270 stores indicated that the agricultural population was of outstanding importance. These figures, reduced to a percentage basis, indicated that the agricultural population, or trade, was of little or no importance in about 45 per cent of the stores, of some importance in about 33 per cent, and of outstanding importance in 22 per cent.

Similarly, 681 stores reported professional population to be of little or no consequence, 473 stores reported it as being of secondary importance, while 74 stores indicated the professional group as being of outstanding importance. These figures, reduced to percentages, show that professional groups were the major part of the trade in 6 per cent of the stores, a secondary part in 38.5 per cent, and of little or no importance in the trade served by 55.5 per cent.

An inspection of the percentage figures under "major importance" shows that the industrial and agricultural groups are outstanding, while the tourist or transient population, and those engaged in trading pursuits, were of major importance in very few instances. In the light of these figures the representative store in this group serves a trade either preponderantly industrial or agricultural.

TABLE 4.—CHARACTER OF TRADE OF 1,228 STORES

Class of patrons	Little importance		Secondary importance		Major importance	
	Number	Per cent	Number	Per cent	Number	Per cent
Agricultural.....	548	44.6	410	33.4	270	22.0
Executive.....	923	75.2	236	19.2	69	5.6
Industrial.....	504	41.0	399	32.5	325	26.5
Trading.....	1,001	81.5	201	16.4	26	2.1
Professional.....	681	55.5	473	38.5	74	6.0
Office workers.....	606	49.3	451	36.2	141	11.5
Transient.....	963	78.4	235	19.1	30	2.5
Generally mixed.....	532	43.3	509	41.5	187	15.2

Provision was made in the questionnaire for describing the type of population served under three headings—native white, foreign, and negro. As in the case of the data immediately preceding, these items were to be left unchecked, to be single-checked, or double-checked, depending upon the degree of importance each held with respect to the particular store. In the accompanying table the results are set forth for the 1,176 stores reporting on this point. This table should be interpreted in exactly the same manner as the one preceding. Special attention is called to the footnotes. It seems evident that, in many cases, where the native white population constituted all or nearly all of the trade served by the store, a single check mark was used to describe that fact, rather than the double check; the other two classifications being of practically no importance, it did not seem necessary to make any further specification than a single check mark.

TABLE 5.—TYPE OF POPULATION SERVED BY 1,176 STORES

Type of population	Little importance		Secondary importance		Major importance	
	Number	Per cent	Number	Per cent	Number	Per cent
Native white.....	35	3.0	1586	140.8	555	47.2
Foreign born.....	877	74.6	292	24.8	7	.6
Negro.....	762	64.8	378	32.1	36	3.2

<sup>1</sup> These values are probably larger than they should be and the corresponding items under "Major importance" less than they should be, because of many instances in which a single check mark was used to describe the trade served in exclusively native white districts.

## STORE NEIGHBORS

Provision was also made for recording businesses located next door and near the store reporting. For the statistical treatment of these data, a list of 46 kinds of stores, and a miscellaneous classification, was prepared, and each class given a number. The neighbor stores reported on the questionnaire were then classified in accordance with this list. All but 2 of the 47 classifications on the list were mentioned at least once by the 1,218 stores reporting in this section. In the accompanying table there is listed a group of 15 kinds of stores which proved to be of outstanding importance as business neighbors. These 15 kinds of stores are listed according to three classifications—as

next-door neighbors, near-by neighbors, and for the two groups combined. They are arranged in order of their importance in the combined classification.

Drug stores, heading the list, were mentioned 167 times among all of the next-door neighbors reported. Drug stores were also mentioned 246 times among near-by neighbors, giving a total of 413 times for both groups combined. On a percentage basis, drug stores constituted 8.3 per cent of all stores mentioned among next-door neighbors, 9.8 per cent among near-by neighbors, and 9.1 per cent for both groups combined. It will be observed that the order of rank of the 15 kinds of stores in the group is very much the same among next-door and near-by neighbors. In only one instance is there any considerable difference; this occurs in connection with the department-store classification, the department store apparently being not a very frequent next-door neighbor to the jewelry store, but a fairly frequent near-by neighbor. These 15 kinds of stores, in the group of 47 classifications, account for about three-fourths of all neighbors reported.

TABLE 6.—BUSINESS NEIGHBORS OF 1,218 STORES

Kind of business	Next door		Near by		Combined	
	Times mentioned	Per-cent <sup>1</sup>	Times mentioned	Per-cent <sup>1</sup>	Times mentioned	Per-cent <sup>1</sup>
Drug	167	8.3	246	9.8	413	9.1
Men's clothing and furnishings	173	8.6	211	8.4	384	8.5
Grocery and delicatessen	135	6.7	186	7.4	321	7.1
Shoe	164	8.2	127	5.1	291	6.4
Department	69	2.9	182	7.2	241	5.3
Miscellaneous	99	4.9	133	5.3	232	5.1
Bank	84	4.2	147	5.9	231	5.1
Women's clothing and furnishings	120	6.0	102	4.1	222	4.8
Restaurant	95	4.7	83	3.3	178	3.9
Variety (including 5 and 10 cent stores)	69	3.4	102	4.1	171	3.8
Barber shop or beauty parlor	73	3.6	65	2.6	138	3.1
Dry goods and notions	54	2.7	84	3.3	138	3.1
Jewelry	39	1.9	91	3.6	130	2.9
Furnishing and house furnishings	41	2.0	76	3.0	117	2.6
Confectionery, ice cream, soft drinks	65	3.2	53	2.1	118	2.6

<sup>1</sup> Per cent of the total of all stores mentioned.

#### AGE OF BUSINESS, LOCATION, NAME, AND MANAGEMENT

Four items in the questionnaire were allowed for recording the age of each store and how long it had been in the present location, under the present name, and under the present management. Nearly all stores reported on these four items.

Stores were classified in age groups, beginning with those less than 5 years old, and extending up to those 100 or more years old; 65 are less than 5 years old, while 9 are 100 or more years of age. The median age is a little over 25 years; the quartile points indicate that one-fourth of the stores were less than 13.4 years of age and one-fourth of them more than 40.9 years of age. The oldest store reporting had been in business 145 years.

With regard to age of location of stores, for the 1,235 stores reporting the median proved to be 12.7 years; one-fourth of the stores had been in the present location less than 5.8 years, while one-fourth

of them had been in the present location more than 23.9 years. One store had been located continuously in one place for 112 years.

The median age of name of stores is 17 years. One-fourth of the stores had operated continuously under one name for less than 8.6 years, while the upper fourth had operated under one name for more than 29.2 years. The oldest store in the group reported that it had operated continuously under one name, except for changes in the initials, for 145 years.

The median figure under age of management is 15.7 years, with one-fourth of the stores lying below 8.3 years, and one-fourth above 26.9 years. In the two upper classifications for this particular item are a number of stores that reported a continuous management which, in reality, has involved more than one manager or proprietor; in these cases, in most instances, the management has been an overlapping one between father and son, or some other member of the family, through several generations.

TABLE 7.—AGE OF BUSINESS, LOCATION, NAME, AND MANAGEMENT

Age	Number of stores reporting			
	Age of business	Age of location	Age of name	Age of management
Less than five years	65	264	130	132
5 to 9 years	163	264	249	268
10 to 14 years	121	165	183	200
15 to 19 years	132	148	142	143
20 to 24 years	132	110	142	150
25 to 29 years	238	137	195	203
30 to 34 years	204	90	124	114
35 to 39 years	146	49	57	128
40 to 44 years	31	6	13	13
45 to 49 years	9	2	3	3
50 or more years				
Total reporting	1,241	1,235	1,238	1,241
First quartile	13.4	5.8	8.6	8.3
Median	25.3	12.7	17.0	15.7
Third quartile	40.9	23.9	29.2	26.9

<sup>1</sup>In some cases this refers to management within a family through several generations.

Oldest business, 145 years; longest in present location, 112 years; longest under present name, 145 years (initials only changed); longest under present management, 83 years (overlapping within a family).

#### FORM OF OWNERSHIP

Table 8 depicts the manner in which 1,263 stores reported the form of ownership under which they are operated. Nearly two-thirds of the stores reported being individually owned, about one-sixth of them partnerships, and about one-fifth incorporated.

TABLE 8.—DISTRIBUTION OF 1,263 STORES WITH RESPECT TO FORM OF OWNERSHIP

Form of ownership	Number	Per cent
Individual	805	63.7
Partnership	214	16.9
Incorporated	244	19.4
Total	1,263	100.0



## PERSONNEL

In Table 9 data concerning personnel are set forth for 1,218 stores reporting. The stores are again grouped according to annual net sales. It will be noticed that there are 27 stores in the lowest net sales groups; these stores did an aggregate business of \$48,200 in 1929 and employed 34 people, including proprietors. The average net sales per employee was \$1,417. The last two columns of the table show the average number of employees per store and the median number. In this first group the average number is 1.3, while the median number is 1.

It will be noted that the typical store in this group of 1,218 stores is a 3-man store—in spite of the fact that the average number of employees is 6.8. Here is another instance of the discrepancy which often exists between median and average figures; in this particular case, it is due to the fact that the very large stores, although smaller in number than those in the lower net sales groups, far outweigh the latter in the number of workers employed. On that account they tend to push the average figure far above what might reasonably be looked upon as typical of the entire group of stores. An inspection of the quartile points shows that one-fourth of the stores employed three or less people, while the upper fourth employed five or more workers.

It will be observed that the average sales per employee rose in exactly the same order as the net sales groups, from a figure of \$1,417 among stores doing less than \$2,500 business a year to \$12,417 in stores doing \$1,000,000 or more business a year. It is impossible to say, of course, just what factors tend to produce this large difference. Greater flexibility in the use of personnel as stores increase in size undoubtedly accounts for some of it; the greater percentage of sales of high-priced merchandise in the large stores also probably has considerable weight in this matter.

TABLE 9.—TOTAL, AVERAGE, AND MEDIAN NUMBER OF EMPLOYEES AS OF DECEMBER 31 AND AVERAGE SALES PER EMPLOYEE OF 1,218 STORES

Net sales	Number of stores	Total net sales	Total number of employees	Average sales per employee	Employees per store	
					Average	Median
Less than \$2,500.....	27	\$48,200	34	\$1,417	1.3	1
\$2,500 to \$4,999.....	62	235,900	89	2,651	1.4	1
\$5,000 to \$9,999.....	144	1,082,600	267	4,055	1.9	2
\$10,000 to \$24,999.....	376	6,238,400	1,035	6,027	2.8	3
\$25,000 to \$49,999.....	265	9,329,300	1,125	8,293	4.2	4
\$50,000 to \$99,999.....	178	12,228,800	1,243	9,838	7.0	6
\$100,000 to \$249,999.....	103	15,801,800	1,408	11,223	13.7	13
\$250,000 to \$499,999.....	34	11,670,700	1,039	11,233	30.6	26
\$500,000 to \$999,999.....	22	15,329,200	1,335	11,483	60.7	63
\$1,000,000 or more.....	7	9,375,000	755	12,417	107.9	106
Total.....	1,218	\$1,339,900	8,330	9,765	6.8	3

In the questionnaire provision was made for recording the size of personnel in three ways; the number employed on December 31, 1929, the largest number employed at any time during the year, and the

smallest number employed at any time during the year. Among these three items, two sets of computations were made for each questionnaire which supplied these data. In the one instance, the difference between the December 31 personnel and the largest number employed at any time during the year was taken, and converted into a percentage increase, based on the December 31 personnel. These increases were then tabulated by net sales groups; the results are shown in Table 10.

Among the 25 stores in the group doing less than \$2,500 business a year (most of these, of course, are 1-man stores, although there were a few instances in which an additional employee was used at one time or another during the year), the median indicated no increase. The same was true of the group of 56 stores doing an annual business of from \$2,500 to \$5,000. Considering all groups, the median percentage of increase was 32.2 per cent—in other words, the typical store apparently increases its personnel by about one-third in order to take care of the rush season, assuming that the December 31 basis for personnel is a normal one.

Inspection of the table shows that the medium-sized stores increased their personnel for the rush season to a much greater degree than either the very small stores or the very large ones. This is easily understandable, however, since the small stores do not need to increase their personnel, while the very large ones have a sufficient amount of flexibility in the allocation of personnel during the busy season to take care of the situation with a relatively small increase.

TABLE 10.—MEDIAN PERCENTAGE INCREASE IN PERSONNEL TO MAXIMUM NUMBER DURING YEAR FROM NUMBER ON DECEMBER 31, IN 1,164 STORES

Net sales	Stores	Median per cent increase in personnel	Net sales	Stores	Median per cent increase in personnel
Less than \$2,500.....	25	0.0	\$100,000 to \$249,999.....	97	34.6
\$2,500 to \$4,999.....	56	0.0	\$250,000 to \$499,999.....	32	15.0
\$5,000 to \$9,999.....	131	32.5	\$500,000 to \$999,999.....	19	24.0
\$10,000 to \$24,999.....	370	36.1	\$1,000,000 and more.....	6	15.0
\$25,000 to \$49,999.....	253	38.5			
\$50,000 to \$99,999.....	175	32.9	Total.....	1,164	32.2

The matter of increase of personnel is depicted in an entirely different manner in Table 11. In this case, stores have been grouped according to the percentage of increase between the number of employees on December 31 and the largest number during the year. The first column of the table shows the number of stores which fall within each of the groups, while the other column shows the percentage of stores which indicated the specified increase.

On studying the table it will be found that 369 stores, out of the total of 1,164, reported no increase in personnel from the December 31 figure; this group constitutes 31.7 per cent of the total number



of stores. The range of increase shown in the table is from no increase to more than 150 per cent increase. Actually, the highest increase reported was 300 per cent, in the case of one store. The median percentage of increase, as indicated below the table, was 32.2 per cent; this figure, it will be noted, corresponds exactly with that given in the preceding table. The first quartile point indicates that one-fourth of the stores, at least, reported no increase in personnel. The third quartile point shows that one-fourth of the stores reported an increase in personnel in excess of 63.1 per cent. It will be observed that three of the classifications, aside from that for no increase, show percentages considerably higher than those to be found in the other classifications. This is particularly noticeable in the classification running from 25 per cent through 39 per cent. This situation is easily explicable through the fact that two very common percentage increases lie within that group, namely, 25 per cent and 33.3 per cent. The same situation is true with regard to the 50 to 59 per cent classification and the 100 to 149 per cent classification; in these instances, too, frequently occurring percentages are to be found.

TABLE 11.—PERCENTAGE INCREASE IN PERSONNEL TO MAXIMUM DURING YEAR FROM NUMBER ON DECEMBER 31 IN 1,164 STORES

Increase in personnel	Number	Per cent	Increase in personnel	Number	Per cent
No increase.....	369	31.7	60 to 74.9 per cent.....	87	7.5
1 to 14.9 per cent.....	48	4.1	75 to 99.9 per cent.....	25	2.2
15 to 24.9 per cent.....	67	5.8	100 to 149.9 per cent.....	138	11.9
25 to 39.9 per cent.....	203	17.4	150 per cent or more.....	59	5.0
40 to 49.9 per cent.....	42	3.6			
50 to 59.9 per cent.....	126	10.8	Total.....	1,164	100.0

First quartile increase, 0.0 per cent; median increase, 32.2 per cent; third quartile increase, 63.1 per cent.

Decreases in personnel, from the December 31 figure to the smallest number employed during the year, are treated in the next two tables. The first of these, Table 12, conforms exactly, in its general plan, to Table 10, describing increases in personnel, while the second one is identical in form with Table 11. Table 12 shows that the stores in all of the net sales groups up to \$250,000 annual net sales registered no decrease in personnel, figured on a median percentage decrease basis, when comparing the smallest number of employees at any time during the year with the number of employees on December 31. Actually, a considerable number of these stores showed some decrease, in some cases amounting to a considerable change on a percentage basis; but the typical store in each of these classifications did not cut down its personnel from the December 31 figure at any time during the year. Among stores doing \$1,000,000 or more business a year a 5 per cent decrease was registered, while in the two groups next below it in net sales there was a slightly larger percentage decrease.

TABLE 12.—MEDIAN PERCENTAGE DECREASE IN PERSONNEL TO MINIMUM DURING YEAR FROM NUMBER ON DECEMBER 31 IN 1,158 STORES

Net sales	Stores	Median per cent decrease in personnel	Net sales	Stores	Median per cent decrease in personnel
Less than \$2,500.....	25	0.0	\$100,000 to \$249,999.....	100	0.0
\$2,500 to \$4,999.....	53	0.0	\$250,000 to \$499,999.....	32	8.3
\$5,000 to \$9,999.....	125	0.0	\$500,000 to \$999,999.....	20	6.9
\$10,000 to \$24,999.....	366	0.0	\$1,000,000 and more.....	6	5.0
\$25,000 to \$49,999.....	255	0.0			
\$50,000 to \$99,999.....	176	0.0	Total.....	1,158	0.0

In Table 13 the stores are classified in groups according to the percentage decrease in personnel. It will be noted that 841 stores, constituting 72.6 per cent of the total stores, showed no decrease. The only other large group, 120 stores in the 25 to 39 per cent classification, owes its relatively large size to the fact that, as in the preceding discussion of percentage of increase, two very common values lie within that particular classification.

TABLE 13.—DECREASE IN PERSONNEL TO MINIMUM DURING YEAR FROM NUMBER ON DECEMBER 31 IN 1,158 STORES

Percentage of decrease in personnel	Number	Per cent	Percentage of decrease in personnel	Number	Per cent
No decrease.....	841	72.6	50 to 59.9 per cent.....	42	3.6
1 to 14.9 per cent.....	69	6.0	60 to 74.9 per cent.....	14	1.2
15 to 24.9 per cent.....	60	5.2	75 to 99.9 per cent.....	4	.3
25 to 39.9 per cent.....	120	10.4			
40 to 49.9 per cent.....	8	.7	Total.....	1,158	100.0

First quartile, no decrease; median, no decrease; third quartile, 6 per cent decrease.

## OPERATING PRACTICES AND PERFORMANCE

### COMPARISON OF NET SALES IN 1928 AND 1929

All stores which reported net sales for both 1928 and 1929 were compared in a variety of ways in order to determine changes in volume. The results are set forth in the four tables following. In Table 14 stores are grouped according to total net sales for 1929, starting with those doing an annual business of less than \$2,500 and running up to a group of stores doing \$1,000,000 or more business a year. There were 1,089 stores reporting; 23 of them did an annual business of less than \$2,500. Those 23 stores reported aggregate net sales of \$48,900 in 1928 and \$41,900 in 1929, a decrease of 14.3 per cent in 1929. There were 42 stores which did between \$2,500 and \$5,000 business in 1929. The total net sales of these stores amounted to \$158,100 in 1929 and \$157,800 in 1928, an increase of 0.2 per cent for 1929 as compared with 1928.

Below the table certain summarized figures are given.

TABLE 14.—COMPARISON OF NET SALES IN 1928 AND 1929, BY SIZE GROUPS

Net sales	Stores	Total net sales		Per cent change
		1928	1929	
Less than \$2,500.....	23	\$48,900	\$41,900	-14.3
\$2,500 to \$4,999.....	42	157,800	158,100	+0.2
\$5,000 to \$9,999.....	182	1,046,400	998,300	-4.6
\$10,000 to \$24,999.....	322	5,564,500	5,369,600	-3.6
\$25,000 to \$49,999.....	239	8,414,900	8,422,700	+0.1
\$50,000 to \$99,999.....	169	11,697,300	11,637,300	-0.5
\$100,000 to \$249,999.....	99	15,679,500	15,272,600	-2.6
\$250,000 to \$499,999.....	34	11,915,600	11,764,900	-1.3
\$500,000 to \$999,999.....	22	15,374,100	15,329,200	-0.3
\$1,000,000 or more.....	7	10,335,900	9,375,000	-9.3
Total.....	1,089	80,134,900	78,369,600	-2.2

1929, average net sales, \$71,964; first quartile point, \$13,605; median, \$27,667; third quartile point, \$67,382.

1928, average, \$73,586; first quartile point, \$22,942; median, \$27,904; third quartile point, \$67,516.

In order to throw light on this situation from a different angle, data concerning increase or decrease are presented in Table 15. The first group of 23 stores, doing an annual business of less than \$2,500, includes 7 stores which show an increase in sales in 1929, 2 showed no change (greater than \$100), while 14 reported decreases. Arranging the percentage changes in order, from the greatest decrease to the greatest increase, it was found that the median percentage change for the groups was minus 8 per cent.

TABLE 15.—INCREASE OR DECREASE IN NET SALES IN 1929 COMPARED WITH 1928, BY SIZE GROUPS

Net sales	Stores	Stores reporting—			Median per cent change
		Increase	No change	Decrease	
Less than \$2,500.....	23	7	2	14	-8.0
\$2,500 to \$4,999.....	42	21	3	18	+1.0
\$5,000 to \$9,999.....	182	50	1	81	-3.5
\$10,000 to \$24,999.....	322	136	12	174	-1.7
\$25,000 to \$49,999.....	239	108	9	122	-2.2
\$50,000 to \$99,999.....	169	85	1	83	+4.4
\$100,000 to \$249,999.....	99	42	1	57	-2.4
\$250,000 to \$499,999.....	34	15	1	19	-1.0
\$500,000 to \$999,999.....	22	7	1	15	-3.0
\$1,000,000 or more.....	7	1	1	6	-8.0
Total.....	1,089	472	28	589	-1.4

An inspection of the total line of the table shows that, of the 1,089 stores reporting, 472 showed an increase in business, 28 showed no change, while 589 showed a decrease in 1929 as compared with 1928. The median percentage change is indicated as minus 1.4 per cent. There is a discrepancy between this figure of median percentage change and that of average percentage change, as given in the preceding table. This discrepancy may be accounted for through the method used in arriving at the figures, a detailed explanation of which has been given in the section "Explanation of statistical terms." In this particular instance the two figures, while not identical, show a similar condition.

A third comparison is set forth in Table 16. In this case stores have been grouped according to the geographic subdivisions described on page 2. The stores are identical with those treated in the two preceding tables, except that one store has been eliminated from this group because it did not give data which would allow for geographic classification.

The table shows that 62 stores located in New England reported net sales of \$5,412,100 in 1928 and \$5,386,500 in 1929, a decrease of 0.5 per cent. The figures for the other geographic subdivisions should be interpreted in precisely the same manner.

The comparison, in general, shows that the Midwest States fell off considerably in net sales in 1929; the same was true of the South eastern States and of the Gulf Southwest, but to a less marked degree. The Pacific Northwest showed a considerable gain for 1929 over 1928.

TABLE 16.—COMPARISON OF NET SALES 1928 AND 1929, BY GEOGRAPHIC SUBDIVISIONS

Region	Stores	Total net sales		Per cent change
		1928	1929	
New England.....	62	\$5,412,100	\$5,386,500	-0.5
Central Atlantic.....	261	20,149,500	20,091,500	-0.3
Midwest.....	343	24,446,400	23,185,800	-5.2
Southeast.....	78	5,819,800	5,174,600	-11.8
Gulf Southwest.....	99	9,253,700	9,016,400	-2.6
West Midcontinent.....	62	2,111,100	2,122,800	+0.6
Central Northwest.....	44	1,256,700	1,248,700	-0.6
Pacific Northwest.....	63	8,135,700	8,360,900	+2.8
Pacific Southwest.....	76	8,421,900	8,369,600	-0.6

Still another manner of presenting this comparison is set forth in Table 17. In this case stores are grouped according to the population of the city or town in which they are located. This table shows that 211 stores located in towns under 5,000 in population did a total business of \$2,532,300 in 1928 and \$2,533,400 in 1929, a negligible difference. There were 1,015 stores included in the table. For all of them there was a decrease of 2.3 per cent in net sales in 1929 from 1928. It will be observed that that figure agrees almost exactly with the one given in Table 14; the very slight discrepancy may be accounted for by the difference in number of stores included.

TABLE 17.—COMPARISON OF NET SALES IN 1928 AND 1929 BY CITY-SIZE GROUPS

Population	Stores	Total net sales		Per cent change
		1928	1929	
Under 5,000.....	211	\$2,532,300	\$2,533,400	+0.7
5,000 to 9,999.....	112	2,194,500	2,210,000	-.8
10,000 to 24,999.....	144	4,299,200	4,293,500	+1.6
25,000 to 49,999.....	108	4,803,800	4,879,900	-5.1
50,000 to 99,999.....	84	6,311,700	5,988,400	-1.5
100,000 to 249,999.....	101	9,036,500	8,904,400	-1.9
250,000 to 499,999.....	89	15,920,500	15,615,300	-6.1
500,000 to 999,999.....	54	9,487,200	8,912,700	-2.1
1,000,000 and over.....	112	19,147,300	18,745,000	-2.3
Total.....	1,015	73,733,000	72,052,600	

A further inspection of these four tables brings out one other illuminating fact. It will be observed that the greatest decreases in sales occurred among the very small stores and the very large ones. In Table 14, a decrease of 14.3 per cent is indicated for the stores doing less than \$2,500 business annually, while those doing \$1,000,000 or more business showed a decrease of 9.3 per cent. In no other net sales group was there any percentage change nearly so great as in these two. A like condition is indicated in Table 15, perhaps even more clearly. One further fact comes to light, however; that, of the 29 stores doing an annual business of \$500,000 or more, 21 showed a decrease, while only 8 showed an increase. The distribution of change throughout the remainder of the group is fairly even.

A similar inspection of the data presented in Table 17 shows that the decrease in business in 1929 was to be found particularly in the stores located in larger cities. Stores located in towns or cities up to 50,000 in population showed very little change, while those located in cities of 50,000 or more, for the most part, showed considerable decreases. This condition is to be noticed particularly in cities having over 500,000 population.

## COMPARISON OF NET SALES IN 1929 WITH EARLIER YEARS

In Table 18 comparisons are drawn between each one of the several years for which sales data were requested and 1929. The stores compared in any horizontal line are identical. However, the number of stores compared varies materially among the several years; as the record of net sales extended itself over a considerable period of years, fewer stores were able to supply the necessary data. While the method

of comparison is entirely valid, the reliability of figures as an index of the entire retail jewelry trade varies with the number of stores on which the comparisons are based. Thus, the comparison figure for 1929 with 1928 may be regarded as being a better guide than that with any year from 1924 to 1927; those figures, in turn, are more useful than the comparison with 1919, which is more nearly representative than that with 1914.

The total net sales for the 236 stores reporting both for 1914 and 1929 were a little more than half as much in 1914 as in 1929. In 1919 total net sales registered more than 110 per cent of 1929. Similarly, for 686 stores, the years from 1924 to 1927 showed ratios of 97.9 per cent, 104.3 per cent, 105.4 per cent, and 103.2 per cent, in order. In 1928 the ratio was 102.2 per cent.

There are undoubtedly some factors which caused a certain amount of distortion in the figures. For example, unit prices of many articles sold in jewelry stores were undoubtedly lower in 1914 than they were in 1929; also they were undoubtedly higher in some years than they were in 1929. One other factor might be taken into consideration. It is generally admitted that 1919 was unusual, but just what allowance should be made for this factor is, of course, purely speculative, so that no correction or weighting can be legitimately applied.

In order to make a correction or adjustment for the difference in unit price of merchandise throughout the period of years involved, it would be necessary to apply what are technically known as "deflators." These factors are frequently used for certain forms of comparisons where it is necessary to reduce everything to a common basis. However, no adequate data are at hand for the derivation of deflators for articles of merchandise commonly sold in jewelry stores. On that account it is necessary to forego the correction or adjustment process just described. The figures as given are significant in themselves, and while the corrections suggested would undoubtedly prove interesting, they are by no means necessary for the purposes of this study.

TABLE 18.—COMPARISON OF NET SALES IN 1929 AND PREVIOUS YEARS

Year compared	Stores	Total net sales		
		Specified year	1929	Per cent of 1929
1914.....	236	\$14,217,700	\$27,482,000	51.7
1919.....	395	43,848,800	39,538,200	110.9
1924.....	686	53,359,800	54,499,100	97.9
1925.....	686	56,831,200	54,499,100	104.3
1926.....	686	57,457,700	54,499,100	105.4
1927.....	686	56,222,000	54,499,100	103.2
1928.....	1,089	80,134,900	78,369,600	102.2

The trend of net sales for the years from 1924 to 1929 is shown in considerably greater detail in Table 19, which shows the net sales records of the 686 stores reporting sales for all years from 1924 to 1929 divided into nine groups according to geographic subdivisions. Total net sales for each of the six years are compared with the total net sales for 1924. There was an increase in 1925 of 6.5 per cent, in 1926 of 7.7 per cent, in 1927 of 5.4 per cent, in 1928 of 6.4 per cent, and in 1929 of 2.1 per cent.



TABLE 19.—COMPARISON OF SALES IN 1924 WITH LATER YEARS, BY GEOGRAPHIC SUBDIVISIONS

Region	Stores	Net sales in 1924	Net sales in 1925		Net sales in 1926	
			Amount	Per cent of 1924	Amount	Per cent of 1924
New England.....	36	\$3,349,400	\$3,418,200	102.0	\$3,481,400	103.9
Central Atlantic.....	171	12,831,100	13,559,600	105.7	13,738,200	107.1
Midwest.....	219	16,061,500	17,013,200	105.9	17,302,600	107.7
Southeast.....	45	4,391,000	5,013,700	114.2	4,654,300	106.0
Gulf Southwest.....	62	6,862,400	7,602,800	110.8	7,928,500	115.6
West Midcontinent.....	43	1,826,600	1,843,500	101.0	1,811,400	99.2
Central Northwest.....	27	709,700	723,100	102.2	690,600	97.3
Pacific Northwest.....	43	1,865,700	2,006,400	107.5	2,115,000	113.4
Pacific Southwest.....	40	5,462,400	5,648,900	103.4	5,735,700	105.0
Total.....	686	53,359,800	56,831,200	106.5	57,457,700	107.7

Region	Net sales in 1927		Net sales in 1928		Net sales in 1929	
	Amount	Per cent of 1924	Amount	Per cent of 1924	Amount	Per cent of 1924
New England.....	\$3,641,200	108.7	\$3,733,900	111.5	\$3,667,100	109.5
Central Atlantic.....	13,325,700	103.8	13,561,900	105.7	13,906,800	108.6
Midwest.....	16,898,600	105.2	17,635,800	109.2	16,485,600	102.6
Southeast.....	4,324,500	98.5	3,908,100	89.0	3,778,900	86.1
Gulf Southwest.....	7,563,600	110.2	7,660,300	111.6	7,329,600	106.8
West Midcontinent.....	1,786,500	97.8	1,722,000	94.3	1,706,800	93.4
Central Northwest.....	715,800	100.8	749,800	105.6	756,400	106.6
Pacific Northwest.....	2,247,000	120.4	2,310,500	123.8	2,429,400	132.4
Pacific Southwest.....	5,719,100	104.7	5,601,300	102.5	5,398,800	98.8
Total.....	56,222,000	105.4	56,783,600	106.4	54,499,100	102.1

In Table 20 similar data are presented for each of 10 States, all which supplied more than 20 questionnaires giving net sales data uninterruptedly for 1924 to 1929.

TABLE 20.—COMPARISON OF SALES IN 1924 AND LATER YEARS, BY STATES

State	Number of stores	Net sales in 1924	Net sales in 1925		Net sales in 1926	
			Amount	Per cent of 1924	Amount	Per cent of 1924
Pennsylvania.....	65	\$3,789,600	\$3,868,200	102.1	\$3,817,100	100.7
New York.....	64	5,095,300	5,495,300	107.8	5,743,700	112.7
Illinois.....	54	4,884,900	4,961,600	101.6	5,175,600	105.9
Ohio.....	46	3,045,200	3,579,700	106.4	4,033,600	110.6
Wisconsin.....	43	1,670,200	1,735,100	103.9	1,724,900	103.3
California.....	35	5,217,400	5,383,100	103.2	5,445,500	104.4
Washington.....	28	1,299,000	1,379,300	106.2	1,461,800	112.5
Missouri.....	25	2,621,700	2,868,200	109.4	3,071,100	117.1
Indiana.....	22	944,500	969,500	102.6	956,000	101.2
Iowa.....	22	737,200	765,900	103.9	720,000	97.7

State	Net sales in 1927		Net sales in 1928		Net sales in 1929	
	Amount	Per cent of 1924	Amount	Per cent of 1924	Amount	Per cent of 1924
Pennsylvania.....	\$3,735,600	98.6	\$3,401,800	89.8	\$3,339,300	88.1
New York.....	5,559,700	109.1	6,186,700	121.4	5,784,400	114.5
Illinois.....	5,080,300	104.0	5,237,000	107.2	4,919,300	100.7
Ohio.....	4,073,800	111.7	4,212,200	115.5	3,889,500	104.7
Wisconsin.....	1,690,800	101.2	1,700,100	101.8	1,610,800	96.4
California.....	5,347,700	103.3	5,261,500	100.8	5,022,000	96.3
Washington.....	1,609,100	123.9	1,699,500	130.8	1,911,000	147.1
Missouri.....	2,795,500	106.6	2,869,600	109.4	2,690,500	102.6
Indiana.....	935,500	99.0	846,100	89.6	896,900	95.0
Iowa.....	706,200	95.8	697,700	94.6	638,700	86.6

## NET SALES BY MONTHS

Earlier in this report several comparisons were drawn between net sales for 1928 and 1929. Still further light may be thrown on this subject through a study of monthly indexes of net sales during 1929, and a comparison with average monthly indexes as determined through the studies made for the American National Retail Jewelers' Association by the Harvard Bureau of Business Research from 1919 to 1927.

In Table 21 the percentage of the total 1929 sales is shown by months. Each of these percentage figures has then been converted into a monthly index figure, taking one-twelfth of the year's sales as 100. The Harvard index for each month was computed by taking the average for each month for five separate Harvard studies covering one year each.

It will be noticed that, among the stores reporting in this study, the month of January accounted for 6.5 per cent of the total year's sales, while December accounted for 20.9 per cent. The corresponding monthly index figures are 78 and 251, respectively. The Harvard average index figures for those same months are 67 and 353, respectively. Using these index figures in pairs, with the Harvard average index as the base, a percentage ratio has been derived and shown in the last column of the table. The figure for January is 116.4 per cent; this indicates that the month of January, 1929, was 16.4 per cent ahead of the index for January in the period of five years treated in the Harvard studies. Similarly, each month of 1929, except December, showed an increase over the Harvard index for that month. December, with a ratio of 71.1 per cent, showed a decrease of 28.9 per cent below the average.

It should be understood, of course, that these percentage ratios are not derived through a consideration of actual net sales amounts. It is conceivable, for example, that the year 1929 might have fallen off 50 per cent in net sales, as compared with the average annual sales over the period of five years taken from the Harvard studies, and yet show percentage ratios the same as those given in this table. Nevertheless, this comparison is believed to be useful. In substance it shows one outstanding thing: The month of December, 1929, on a relative basis, was far below the average month of December as determined by the Harvard index. By reducing the December index to a percentage basis by dividing 353 by 1,200, it is found that the month of December, on the average, accounts for 29.4 per cent of the total year's sales in a jewelry store. The decline of 28.9 per cent in December, 1929, from the average December is equivalent to a decrease of 8.5 per cent for the entire year of 1929 from the average year.

The reasons for this acute decrease in sales during the month of December was the financial depression during the latter part of the year. It may be well to point out, however, that the effect of this period of depression was probably felt much more keenly among jewelry stores than it was among the majority of retail stores. The very nature of the merchandise ordinarily sold in a jewelry store is such that, in a period of acute depression, the volume of sales is bound to fall off considerably. The effect of the depression, of course,

was doubly acute for jewelry stores since its effect was strongest in December, when jewelry sales are ordinarily at their peak for the year.

TABLE 21.—NET SALES BY MONTHS

Month	Per cent of total 1929 sales	Index of sales, $\frac{1}{2}$ of year's sales=100		Ratio 1929 index to Harvard index
		1929	Harvard index <sup>1</sup>	
January.....	6.5	78	67	116.4
February.....	6.3	76	58	131.0
March.....	7.0	84	66	127.3
April.....	7.2	86	68	126.5
May.....	7.7	92	83	110.8
June.....	8.3	100	99	101.0
July.....	6.5	78	70	111.4
August.....	7.1	85	76	111.8
September.....	7.1	85	84	101.2
October.....	7.6	91	82	111.0
November.....	7.8	94	91	103.3
December.....	20.9	251	353	71.1

<sup>1</sup> Based on the average for each month for five separate years.

## TIME OF BEGINNING FISCAL YEAR

In Table 22 a record is shown concerning the time of starting the fiscal year. Of the 1,161 stores reporting on that point, 899 indicated that the fiscal year starts on January 1. This group of stores accounts for 77.4 per cent of the total number reporting. Nine other stores, while beginning their fiscal year in January, do so on a date other than the first of the month. A study of this table shows quite clearly that, next to January 1, some date in February is most frequently chosen for starting the fiscal year; a detailed inspection of the reports elicits the fact that February 1 and February 15 are the specific dates used most frequently in this case.

TABLE 22.—TIME OF BEGINNING FISCAL YEAR

Date beginning fiscal year	Stores	Per cent	Date beginning fiscal year	Stores	Per cent
January 1.....	899	77.4	August.....	5	0.4
Other days in January.....	9	.8	September.....	6	.5
February.....	153	13.2	October.....	2	.2
March.....	39	3.3	November.....	2	.2
April.....	14	1.2	December.....	3	.3
May.....	11	.9	Total.....	1,161	100.0
June.....	8	.7			
July.....	10	.9			

## REPAIR SALES

Approximately one-fourth of the stores participating in the survey gave a separate record of repair sales for 1929. Data from these records are set forth in the following three tables.

In Table 23 repair sales are compared with total net sales, with stores arranged in net sales groups. It will be noted that 43 stores below \$10,000 in annual net sales did a total business of \$265,100; total repair sales for the same stores amounted to \$90,100, the ratio of repair sales to total net sales being 34 per cent. Similarly, 17 stores

did an annual business of \$500,000 or more; total net sales amounted to \$14,893,300 and total repair sales to \$1,213,900, giving a figure of 8.2 per cent for repair sales as compared with total net sales. The average of repair sales to total net sales for the entire group of 308 stores was 10.5 per cent. It will be noted that as stores increase in volume of business, the relative amount of repair sales shows a consistent decrease.

TABLE 23.—RATIO OF REPAIR SALES TO NET SALES, BY SIZE GROUPS

Net sales	Stores	Total net sales	Total repair sales	Per cent repair of total sales
Less than \$10,000.....	43	\$265,100	\$90,100	34.0
\$10,000 to \$24,999.....	68	1,156,500	249,400	21.6
\$25,000 to \$49,999.....	71	2,534,700	454,500	17.9
\$50,000 to \$99,999.....	37	3,951,800	444,700	11.3
\$100,000 to \$249,999.....	35	5,437,800	571,400	10.5
\$250,000 to \$499,999.....	17	6,021,500	566,900	9.4
\$500,000 and more.....	17	14,893,300	1,213,900	8.2
Total.....	308	34,260,700	3,590,900	10.5

In Table 24 a similar comparison is made, this time with stores arranged according to city size. Several stores failed to specify population, so that there is a smaller number of stores in this group than in the preceding one.

While it may be seen that, generally speaking, stores located in small towns do a higher percentage of repair business than those located in very large cities, this difference is not nearly so great as that shown for very small stores as compared with very large ones, on the basis of total net sales alone. Many small stores are to be found distributed throughout the entire population range, and on that account the variation is not so great as in the former case.

TABLE 24.—RATIO OF REPAIR SALES TO NET SALES, BY CITY-SIZE GROUPS

Population	Stores	Total net sales	Total repair sales	Per cent repair of total sales
Less than 5,000.....	45	\$506,300	\$103,400	20.4
5,000 to 9,999.....	28	734,600	119,400	16.2
10,000 to 24,999.....	45	1,504,900	238,800	15.9
25,000 to 49,999.....	27	1,455,900	193,500	13.3
50,000 to 99,999.....	27	2,417,100	278,800	11.5
100,000 to 249,999.....	40	4,998,000	535,200	10.7
250,000 to 499,999.....	29	6,387,400	605,000	9.5
500,000 to 999,999.....	22	5,988,500	476,000	7.9
1,000,000 and more.....	31	8,667,400	863,100	10.0
Total.....	294	32,660,400	3,413,200	10.5

Similar relationships between repair sales and total net sales are shown in Table 25, with stores grouped according to the percentage of installment business done. A study of the percentage figures in the last column of the table shows clearly that, among the stores reporting on this point, those doing installment business did an increasingly smaller percentage of repair business as the percentage of installment business increased.

TABLE 25.—RELATION OF REPAIR SALES TO INSTALLMENT BUSINESS

Amount of installment business	Number of stores	Total net sales	Total repair sales	Per cent repair of total sales
Not specified.....	63	\$3,154,900	\$861,200	10.6
None.....	160	16,495,600	1,899,200	11.5
Less than 25 per cent.....	43	4,441,300	514,100	11.6
25 to 49 per cent.....	14	1,100,100	101,200	9.2
50 to 74 per cent.....	13	1,576,700	132,400	8.4
75 to 100 per cent.....	15	2,492,100	92,800	3.7
Total.....	308	34,260,700	3,590,900	10.5

## INSTALLMENT SALES

A set of three items in the questionnaire allowed for recording the amounts of cash sales, charge-account sales, and installment sales during 1929. Not all of the stores reporting gave these data, but a sufficient number of them gave either complete figures or other significant information to provide for a very interesting study on installment sales.

Considerable difficulty was encountered in drawing comparisons so far as cash sales and charge-account sales are concerned. Part of this difficulty arose through the fact that not all stores use the same basis for judging what may be called a cash sale and a charge-account sale. In some instances, only a spot-cash transaction is regarded as a cash sale; in other instances, payments made within a period of 30 days after the time of the sale are considered to be cash payments—these latter, of course, constituting a part of what are ordinarily known as open-account sales. Still other stores apparently regard these open-account payments as being a part of charge-account sales. Because of that and similar difficulties, it was considered advisable not to present any definite figures regarding those two items.

The situation with respect to installment sales, however, was distinctly different. On studying the questionnaires, it was found that 872 stores either by supplying direct figures or by indicating clearly in some other way, showed what amount of installment business, if any, was done. The remaining stores, numbering about 400, did not supply sufficiently definite information to allow for study on this particular item; however, it is quite likely that the situation found among the 872 stores obtains for the remaining 400 stores.

The accompanying table, Table 26, shows how these 872 stores are distributed according to the percentage of installment business done. Of the 872 stores reporting on this item, 630, or 72.3 per cent, reported no installment business; 31, or 3.6 per cent, reported from 85 to 100 per cent of the total net sales to be installment sales.

The 630 stores which definitely indicated doing no installment business reported net sales amounting to \$42,269,300, or 65.9 per cent of the net sales of the entire group of 872 stores. The data in the other lines of the table should be interpreted in the same way.

Approximately 18 per cent of the total net sales of this group of stores was installment business. However, it may be plainly seen that the typical store within the group did no installment business whatever; in fact, the percentage figures show that nearly three-fourths of the stores did no installment business.

TABLE 26.—DISTRIBUTION OF STORES WITH RESPECT TO INSTALLMENT BUSINESS

Installment business done	Stores		Net sales	
	Number	Per cent	Amount	Per cent
None.....	630	72.3	\$42,269,300	65.9
1 to 14.9 per cent.....	70	8.0	4,648,700	7.2
15 to 24.9 per cent.....	39	4.5	2,354,200	3.7
25 to 34.9 per cent.....	19	2.2	1,436,800	2.2
35 to 44.9 per cent.....	9	1.0	874,500	1.4
45 to 54.9 per cent.....	14	1.6	598,300	.9
55 to 64.9 per cent.....	14	1.6	699,800	1.1
65 to 74.9 per cent.....	17	1.9	2,167,400	3.4
75 to 84.9 per cent.....	29	3.3	3,383,900	5.3
85 to 100 per cent.....	31	3.6	5,705,100	8.9
Total.....	872	100.0	64,138,000	100.0

A study of the preceding table shows that 242 stores reported installment business in varying degrees. The distribution of those stores by size groups is shown in Table 27. It will be noted that one store which reported installment sales belongs in the net sales group below \$2,500. This one store constitutes 0.4 per cent of all installment stores. Correspondingly, four stores belong in the group between \$2,500 and \$5,000 in annual net sales; these stores account for 1.7 per cent of all installment stores. None of the installment stores reached the \$1,000,000 mark in annual net sales.

Below the table will be found the quartile point and median net sales figures for these stores. These figures indicate that one-fourth of these stores reported total net sales of less than \$22,704, while one-fourth of them indicated a total business greater than \$97,131. The median net sales figure was \$48,661.

TABLE 27.—DISTRIBUTION OF INSTALLMENT-SELLING STORES BY SIZE GROUPS

Net sales group	Number of stores	Per cent of stores	Net sales group	Number of stores	Per cent of stores
Less than \$2,500.....	1	0.4	\$100,000 to \$249,999.....	35	14.5
\$2,500 to \$4,999.....	4	1.7	\$250,000 to \$499,999.....	16	6.6
\$5,000 to \$9,999.....	14	5.8	\$500,000 to \$999,999.....	6	2.5
\$10,000 to \$24,999.....	49	20.2	\$1,000,000 or more.....	0	0.0
\$25,000 to \$49,999.....	56	23.1	Total.....	242	100.0
\$50,000 to \$99,999.....	61	25.2			

First quartile point, \$22,704; median, \$48,661; third quartile point, \$97,131.

Detailed figures concerning the data in the two preceding tables are presented in Table 28. A study of the table shows 20 stores to be in the group below \$2,500 in annual net sales; these stores constitute 2.3 per cent of the 872 stores reporting. Of these 20 stores, 19 reported no installment business and 1 reported installment business; on a percentage basis, 95 and 5 per cent, respectively, of the 20 stores in the size group, and 2.2 and 0.1 per cent of the 872 stores reporting. The one store which indicated installment business is found among those reporting from 50 to 74.9 per cent of total business done on an installment basis. This store constituted 0.4 per cent of the 242 stores reporting that they did installment business.



TABLE 28.—DISTRIBUTION OF STORES BY PROPORTION OF INSTALLMENT BUSINESS

Net sales	Number of stores	Per cent of stores	Stores doing no installment business			Stores doing installment business						
			Number	Per cent of sales group	Per cent of all stores	Total			From 1 to 24.9 per cent			
						Number	Per cent of sales group	Per cent of all stores	Number	Per cent of sales group	Per cent of all stores	Per cent of installment stores
Less than \$2,500.....	20	2.3	19	95.0	2.2	1	5.0	0.1	3	7.3	0.3	1.2
\$2,500 to \$4,999.....	41	4.7	37	90.3	4.2	4	9.7	.5	12	12.9	1.4	8.2
\$5,000 to \$9,999.....	93	10.6	79	84.9	9.0	14	15.1	1.6	32	12.3	3.7	18.2
\$10,000 to \$24,999.....	259	29.7	210	81.1	24.1	49	18.9	5.6	29	15.3	3.3	16.2
\$25,000 to \$49,999.....	183	21.0	127	69.4	14.6	56	30.6	6.4	39	16.8	3.3	12.0
\$50,000 to \$99,999.....	144	16.5	83	57.7	9.5	61	42.3	7.0	18	12.5	2.1	7.4
\$100,000 to \$249,999.....	80	9.2	45	56.3	5.2	35	43.8	4.0	8	10.0	.9	3.3
\$250,000 to \$499,999.....	27	3.1	11	40.8	1.3	16	59.2	1.8	5	18.5	.6	2.1
\$500,000 to \$999,999.....	19	2.2	13	68.4	1.5	6	31.6	.7	2	10.5	.2	.8
\$1,000,000 or more.....	6	.7	6	100.0	.7							
Total.....	872	100.0	630	72.3	72.3	242	27.7	27.7	109	12.5	12.5	46.0

Net sales	Stores doing installment business—Continued							
	From 25 to 49.9 per cent			From 50 to 74.9 per cent			From 75 to 100 per cent	
	Number	Per cent of sales group	Per cent of all stores	Number	Per cent of sales group	Per cent of all stores	Number	Per cent of all installment stores <sup>1</sup>
Less than \$2,500.....	1	2.4	0.1	1	5.0	0.1	0.4	
\$2,500 to \$4,999.....	1	1.1	.1	1	3.1	.1	.4	
\$5,000 to \$9,999.....	6	2.3	.7	8	3.1	.9	3.3	
\$10,000 to \$24,999.....	12	6.6	1.4	5.0	4	2.2	1.7	
\$25,000 to \$49,999.....	11	7.6	1.3	4.6	12	8.3	1.4	
\$50,000 to \$99,999.....	1	1.3	.1	.4	10	12.5	1.2	
\$100,000 to \$249,999.....	2	7.4	.2	.8	2	7.4	.2	
\$250,000 to \$499,999.....	1	5.3	.1	.4				
\$500,000 to \$999,999.....								
\$1,000,000 or more.....								
Total.....	35	4.0	4.0	14.5	38	4.4	15.7	60

NOTE.—Minor discrepancies in the figures in this table are due to rounding to one decimal place.

## INSTALLMENT TERMS

Provision was made in the questionnaire for reporting installment terms in three ways—down payment, the number of payments, and the length of the installment contract in months. Not all of the stores reporting on this item supplied data in sufficiently definite form to allow for classification in each of the three categories. On that account the number of stores reporting varies considerably among the three items set forth in the following tables.

TABLE 29.—INSTALLMENT TERMS OF JEWELRY STORES

Item	Number of stores	Per cent of stores reporting	Item	Number of stores	Per cent of stores reporting
Down payment:			Number of payments—Contd.		
10 per cent.....	20	14.6	24 or more.....	2	1.4
10 per cent or more.....	2	1.5	36.....	4	2.7
15 per cent.....	1	.7	Total stores reporting.....	147	100.0
20 per cent.....	51	37.2	Length of contract:		
25 per cent.....	33	24.1	Under 6 months.....	80	33.8
33 1/3 per cent or more.....	30	21.9	6 to 9 months.....	47	19.8
Total stores reporting.....	137	100.0	10 to 11 months.....	54	22.8
Number of payments:			12 to 14 months.....	50	21.1
Less than 6.....	107	72.8	15 to 17 months.....	1	.4
6.....	7	4.8	18 to 23 months.....	3	1.3
8.....	4	2.7	24 to 29 months.....	1	.4
9.....	1	.7	30 months and over.....	1	.4
10.....	13	8.8	Total stores reporting.....	237	100.0
12.....	7	4.8			
18.....	2	1.4			

A comparison of this table with similar data secured in the retail-credit survey of the Department of Commerce reveals that between 1927 and 1929 there was considerable tightening up on installment terms. The 1927 table is given in Domestic Commerce Series No. 34, National Retail Credit Survey, Part II, page 41.

## INVENTORY

Provision was made in the questionnaire for recording certain general matters relating to inventory. The data in the following table indicate the manner in which responses were given for those particular items.

TABLE 30.—INVENTORY PRACTICES

Item	Number of stores	Per cent of stores reporting	Item	Number of stores	Per cent of stores reporting
Frequency of taking inventory: <sup>1</sup>			Permanent stock records:		
Annually.....	932	92.3	Used.....	330	29.8
Semiannually.....	67	6.6	Not used.....	776	70.2
Three times a year.....	4	.4	Total stores reporting.....	1,106	100.0
Quarterly.....	7	.7	Basis for taking inventory: <sup>2</sup>		
Total stores reporting.....	1,010	100.0	Cost prices.....	1,067	98.3
Perpetual inventory:			Retail prices.....	19	1.7
Not used at all.....	566	51.2	Total stores reporting.....	1,106	100.0
Used for all items of stock.....	382	34.5			
Used for some items of stock.....	158	14.3			
Total stores reporting.....	1,106	100.0			

<sup>1</sup> Several stores reported taking regular inventory at intervals of 2 to 10 years, in order to check on perpetual inventory.

<sup>2</sup> A few stores indicated either cost or market price, whichever is lower.

Of the 1,259 stores reporting, 502 gave figures on inventory value at the end of the year 1929. Table 31 shows the manner in which these data were given.

TABLE 31.—1929 CLOSING INVENTORIES OF 502 STORES

Net sales	Stores	Inventory value				
		Total	First quartile point	Median	Third quartile point	Average
Under \$10,000.....	73	\$359,800	\$2,900	\$4,000	\$5,700	\$4,929
\$10,000 to \$24,999.....	138	1,783,200	7,200	11,400	16,300	12,922
\$25,000 to \$49,999.....	101	2,314,500	16,800	20,100	26,900	22,916
\$50,000 to \$99,999.....	93	3,610,000	26,100	35,700	49,800	38,817
\$100,000 to \$249,999.....	62	5,050,100	38,900	72,500	101,200	81,453
\$250,000 to \$499,999.....	21	4,151,600	110,800	180,100	240,700	197,690
Over \$500,000.....	14	8,271,400	289,900	433,400	1,033,700	590,814
Total.....	502	25,540,500	8,800	20,100	40,300	50,877

Of the 502 stores which supplied inventory figures for 1929, 100 failed to supply 1928 inventory figures, and on that account it is possible to draw comparisons between 1928 and 1929 inventories for only 402 stores. In Table 32 these data are set forth.

TABLE 32.—COMPARISON OF CLOSING INVENTORIES FOR 1929 AND 1928

Net sales	Stores	1928, total inventory	1929	
			Total inventory	Per cent of 1928
Less than \$10,000.....	51	\$258,600	\$267,800	103.4
\$10,000 to \$24,999.....	100	1,276,900	1,295,400	101.4
\$25,000 to \$49,999.....	87	2,105,300	2,072,400	98.4
\$50,000 to \$99,999.....	79	2,989,600	3,038,800	101.6
\$100,000 to \$249,999.....	62	4,221,700	4,436,000	105.1
\$250,000 to \$499,999.....	20	4,075,000	3,996,800	98.1
\$500,000 or more.....	13	6,554,300	6,839,600	104.4
Total.....	402	21,481,400	21,946,500	102.2

It will be noted that, with the exception of two groups, stocks of merchandise on hand at the end of 1929 were measurably higher than they were at the corresponding time in 1928. In view of the fact that there was a very sharp decline in business during the month of December, 1929, and particularly since that month of the year follows right after the "loading-up" period for purchases of merchandise, that condition is not surprising. It is probably only a coincidence, but still a very interesting one, that the average figure of increase in inventory values for 1929 as compared with 1928 corresponds exactly with the average amount of decrease in net sales for 1929 as compared with 1928. Obviously, some relationship would be expected between the two figures.

Provision was made in the questionnaire for supplying certain detailed figures concerning inventory according to 15 stock classifications. These classifications in some instances are purely arbitrary, since a thorough preliminary investigation showed very clearly that there was little standardization in this regard. The questionnaire

committee of the American National Retail Jewelers' Association in this instance, as in all others, cooperated closely with the Department of Commerce in suggesting and determining just what categories should be used for this particular part of the study. After a careful consideration of the matter, the 15 classifications were decided upon and instructions prepared to explain as clearly as possible just what items of stock should be included in each. These instructions, as printed in the questionnaire, were as follows:

*Diamonds and other precious stones.*—This should include not only unmounted stones, but also all articles of merchandise of which the principal value lies in the precious stones; precious-stone jewelry, jeweled watches, and so forth.

*Jewelry; gold and platinum, solid and front.*—Do not include precious-stone jewelry entered in the preceding classification.

*Other jewelry, excluding costume jewelry.*—Sterling, gold rolled and filled, base metal electroplated; not including costume jewelry or any in the preceding classification.

*Costume jewelry.*

*Watches, other than jeweled.*—All watches containing precious stones, the value of which is the principal part of the cost of the watch, should be included with diamonds and precious stones.

*Electric clocks.*

*Other clocks.*

*Sterling silverware.*—Hollow and flat ware, and all articles of plain sterling not classified above, such as sterling toilet ware.

*Plated silverware.*—Hollow and flat, and articles of plated-ware not included above, except those which should be classified as gifts, novelties, and souvenir items.

*Glass and chinaware, lamps, furniture.*—Table services, and all items of glass and china not classified specifically as optical goods, gifts, novelties, or souvenirs; standard floor, desk, and table lamps; and any articles of furniture.

*Optical goods.*—Lenses, eye glasses, reading glasses, opera and field glasses, cameras and camera supplies.

*Pens, pencils, and stationery.*—Fountain pens, pencils, pen and pencil desk sets, and other desk sets not included above. Boxed stationery and all other desk supplies.

*Gifts; novelty and souvenir items.*—Favors, bridge sets, toilet ware, playing and tally cards, picture postcards, extreme novelty items not previously classified.

*Other merchandise.*—Indicate, by writing in the blank space, what things are included.

*Materials for repairs and engraving.*—Give the inventory value of supplies used definitely in such work, and the sales and gross-profit figures for work either done on the premises or sent out.

Relatively few of the stores were able to supply the detailed figures. The categories set up, in many instances, were distinctly different from those employed in many stores; while in still other stores it is undoubtedly true that little, if anything, had previously been done in splitting down inventories into definite categories. On that account the amount of usable data secured in this particular section of the questionnaire was very limited. In studying and tabulating these data, extreme care was taken to see that only "simon pure" items were included; that is to say, when several categories were bracketed together, as happened in many instances, the figures were not included among those treated in the following two tables.

In Table 33 data are set forth concerning detailed inventory figures for 212 stores which supplied figures for some or all of the 15 classifications. For purposes of comparison the median figures may best be used. It will be noted that diamonds and other precious stones lead all other classifications by a wide margin, nearly 30 per cent of



total inventory belonging in that classification. Gold and platinum jewelry takes second place with 17.9 per cent, followed closely by watches with 16.7 per cent. The electric-clocks class comes at the bottom of the list with 0.5 per cent as the typical figure.

TABLE 33.—DISTRIBUTION OF STOCK

Classification	Stores reporting	Per cent of total inventory			
		Range	First quartile point	Median	Third quartile point
Diamonds and other precious stones.....	212	2.9-79.8	17.5	29.6	39.6
Jewelry; gold and platinum, solid and front.....	168	4.8-75.2	12.0	17.9	24.1
Other jewelry, excluding costume jewelry.....	123	0-36.6	2.6	6.4	10.7
Costume jewelry.....	108	0-17.7	.8	1.8	2.8
Watches, other than jeweled watches.....	190	3-44.4	6.9	10.7	21.6
Electric clocks.....	87	0-3.9	.1	.5	.8
Other clocks.....	144	0-7.0	1.5	2.7	3.5
Sterling silverware.....	156	0-32.4	.9	4.8	13.5
Plated silverware.....	173	0-18.0	3.3	5.5	9.4
Glass and chinaware, lamps, furniture.....	153	0-28.5	.8	2.2	5.1
Optical goods.....	119	0-17.4	.6	1.3	3.0
Pens, pencils, and stationery.....	171	0-8.9	1.0	1.9	3.5
Gifts, novelty and souvenir items.....	123	0-27.8	1.2	2.8	4.9
Other merchandise.....	150	0-44.4	1.3	2.8	5.2
Materials for repairs and engraving.....	134	0-40.1	1.3	2.8	5.7

In Table 34 data concerning percentage of inventory in each of the 15 classifications are again set forth, this time with stores arranged in size groups. Only the median percentages are given in this instance.

TABLE 34.—MEDIAN PERCENTAGES OF INVENTORY VALUE, BY SIZE GROUPS

Classification	Stores reporting	Median percentage of total inventory in stores having net sales—							
		Less than \$10,000	\$10,000 to \$24,999	\$25,000 to \$49,999	\$50,000 to \$99,999	\$100,000 to \$249,999	\$250,000 to \$499,999	\$500,000 and more	All groups combined
Diamonds and other precious stones.....	212	12.3	15.8	28.4	32.6	44.4	42.4	58.8	29.6
Jewelry; gold and platinum, solid and front.....	168	16.9	21.7	18.0	19.4	16.1	14.1	10.7	17.9
Other jewelry, excluding costume jewelry.....	123	12.2	10.0	6.2	4.6	2.9	2.7	.1	6.4
Costume jewelry.....	108	1.8	2.0	1.7	2.0	1.2	1.3	.5	1.8
Watches, other than jeweled.....	190	18.6	17.4	19.8	15.7	13.7	9.7	6.3	16.7
Electric clocks.....	87	.2	.4	.5	.4	.7	.0	.2	.5
Other clocks.....	144	3.2	3.3	2.7	2.0	1.0	1.3	1.6	2.7
Sterling silverware.....	156	2.1	3.3	3.2	4.9	8.0	11.5	9.7	4.8
Plated silverware.....	173	7.8	7.0	5.5	5.1	3.9	3.2	1.9	5.5
Glass and chinaware, lamps, furniture.....	153	2.3	2.7	2.0	2.7	.8	4.9	2.3	2.2
Optical goods.....	119	1.8	2.0	1.1	.9	.1	.9	.2	1.3
Pens, pencils, and stationery.....	171	2.5	2.5	2.0	1.2	1.5	1.0	1.6	1.9
Gifts, novelty and souvenir items.....	123	2.4	2.0	2.4	3.1	1.4	3.1	3.0	2.8
Other merchandise.....	150	6.6	4.6	2.9	3.2	2.2	2.4	1.7	2.8
Materials for repairs and engraving.....	134	9.5	5.1	3.4	2.2	1.8	1.3	1.2	2.8

A detailed study of the table brings to light a number of interesting things concerning differences in inventory among stores of various sizes. There is a very noticeable and consistent rise in the percentage of inventory devoted to diamonds and other precious stones, from the

very small stores up to the very large ones. Gold and platinum jewelry remains fairly constant in stores up to \$100,000 annual net sales, and then drops off materially. The less expensive kinds of jewelry, included in the classification "other jewelry," show a material and consistent decline as stores become larger in size. The same is true, to a less marked degree, for costume jewelry and watches. It will be noted that, generally speaking, sterling silverware rises, while plated silverware falls off, as stores become larger. The classification including materials for repairs and engraving shows a steady and consistent decline as stores become larger; this latter condition, of course, is to be expected, since the small stores, for the most part, do a much higher percentage of repair business than the large stores.

Attention should be called to the fact that, if all of these median percentages for any given net sales group are added together, the resulting figure will not prove to be exactly 100 per cent. The discrepancy in most cases is very small, and it occurs through the fact that these are median rather than average figures. Had average figures been used, the result might have come closer to 100 per cent; however, the validity of each one of the separate figures would have been lessened considerably, since the average figure would not have represented the typical condition as nearly as the median figure does. Secondly, the discrepancy is brought about in part through the fact that the figures are arrived at through the use of a varying number of stores throughout the 15 inventory classifications. The figures in this table are not presented as being absolutely accurate, on account of the several conditions just indicated. However, they may be accepted as representing very closely the typical conditions.

## NET SALES BY COMMODITIES

In Table 35 net sales by commodity classes are shown for the stores reporting on that point, a maximum of 128.

TABLE 35.—SALES, BY COMMODITIES

Classification	Stores	Per cent of total net sales			
		Range	First quartile point	Median	Third quartile point
Diamonds and other precious stones.....	128	0.7-80.7	15.4	21.1	24.9
Jewelry; gold and platinum, solid and front.....	88	3.0-42.1	7.9	12.9	19.0
Other jewelry, excluding costume jewelry.....	51	0-22.3	2.2	4.8	8.0
Costume jewelry.....	41	0-12.0	1.2	2.2	4.7
Watches, other than jeweled watches.....	107	2.0-40.4	10.6	15.7	26.6
Electric clocks.....	26	0-1.4	.0	.5	.7
Other clocks.....	68	1-11.7	1.2	1.9	2.8
Sterling silverware.....	82	2-45.6	2.0	8.7	13.4
Plated silverware.....	98	0-14.8	2.9	4.3	6.3
Glass and chinaware, lamps, furniture.....	72	0-18.0	.6	2.0	5.0
Optical goods.....	58	0-24.1	1.7	3.9	7.0
Pens, pencils, and stationery.....	83	0-32.6	1.1	1.9	3.5
Gifts, novelty and souvenir items.....	55	0-13.2	1.2	2.9	6.6
Other merchandise.....	76	0-42.8	1.1	2.7	8.6
Repairs and engraving.....	126	0-60.3	7.6	12.6	18.2

Comparisons among the various classifications may best be drawn through a study of the median figures. In this case, as in that concerning the percentage of total inventory in each of the classifications, diamonds and other precious stones lead all other categories by a considerable margin. Watches take second place with 15.7 per cent; this particular classification came third in the study of

detailed inventory figures, and displaces gold and platinum jewelry for second position for net sales as compared with inventory percentages. Gold and platinum jewelry takes third place, while repair sales comes fourth.

It is, of course, interesting to draw comparisons between inventory and sales. However, at least three factors must be taken into account in making such comparisons. Other things being equal, it would be expected that the classifications would maintain the same order of rank and show almost exactly the same percentage figures. But there are several intermediate factors, any one of which may effect a change.

In the first place, it is obvious that the percentage of repair sales, depending so little on the amount of material used in repair work, would be much higher than the inventory percentages in that classification. The figures actually show that the net-sales percentage is nearly five times the inventory percentage. The general effect is to reduce proportionately the net sales percentages in each of the other classifications. Secondly, variation among the two sets of figures is influenced materially by both turnover and mark-up. If stock turnover and mark-up were identical among all classifications, it would be possible to make a definite allowance for such a condition as that prevailing in repair sales, whereby the various other categories would be reduced to a directly comparable basis. However, since neither turnover nor mark-up is identical among the various classifications, and there are no adequate data at hand for making the necessary statistical corrections, it is not possible to reduce these two sets of figures to an exactly common basis. In spite of that fact, however, it is still possible to draw comparisons which should prove to be very significant.

#### AGE OF STOCK

An extensive blank table in the questionnaire provided for the classification of inventory with respect to three age categories—less than 1 year old, from 1 to 3 years old, and more than 3 years old. This section of the questionnaire proved to be by far the most difficult one for stores reporting. Very few stores were able to supply the information in detailed form, while only 152 stores gave data even in total form. The results of the figures reported for the inventory totals are set forth in Tables 36 and 37.

In Table 36, the 152 stores have been grouped according to annual net sales.

TABLE 36.—AGE OF STOCK

Net sales	Stores	Per cent of inventory		
		Less than 1 year	1 to 3 years	More than 3 years
Less than \$10,000.....	18	54.8	28.9	16.3
\$10,000 to \$24,999.....	46	50.3	30.5	19.2
\$25,000 to \$49,999.....	33	53.9	31.3	14.8
\$50,000 to \$99,999.....	35	63.3	28.7	8.0
\$100,000 to \$499,999.....	12	65.0	28.4	6.6
\$500,000 or more.....	8	55.6	30.9	13.6
Total.....	152	56.1	29.9	14.0
First quartile point.....		36	21	4
Median.....		59	29	13
Third quartile point.....		74	40	20

An inspection of the figures given in the total line of the table shows that, on the average, more than half of the stock is less than 1 year old, less than a third of it from 1 to 3 years old, and less than one-sixth of it more than 3 years old. Comparison of the figures within each vertical column, devoted to each classification, shows one significant thing—that the small stores and the very large ones are apparently less favorably situated than the medium-sized stores so far as active stock is concerned.

It is quite likely, however, that the reasons for this situation are not the same in the small stores as they are in the very large ones. While the large stores, for the most part, probably enjoy a greater degree of flexibility in stock control than do the small ones, a relatively higher percentage of certain kinds of very expensive merchandise is usually to be found in the large stores; in many cases this very high priced merchandise is less fluid than the less expensive articles.

On the other hand, the very small stores are obligated to maintain a well-diversified inventory but do not have a corresponding diversification, or any large number of customers, in the trade which they serve. Contrasted with these two situations is that of the stores between the two extremes in size. Many of these stores enjoy approximately the same degree of flexibility in stock control as do the very large stores but, at the same time, are less subject to the obligation of stocking large quantities of very high priced merchandise.

The relation between the age of stock and the proportion of installment business done is shown in Table 37. The first group of 14 stores, those not specifying anything concerning installment business, does not, strictly speaking, belong in the table. However, they have been included so that the totals will correspond with those given in the preceding table.

TABLE 37.—RELATION OF AGE OF STOCK TO INSTALLMENT BUSINESS

Installment business	Stores	Average per cent of inventory		
		Less than 1 year old	1 to 3 years old	More than 3 years old
Not specified.....	14	53.4	30.0	16.6
None.....	88	56.3	30.6	13.1
Less than 25 per cent.....	19	40.7	35.5	23.8
25 to 49 per cent.....	8	51.4	34.5	14.1
50 to 74 per cent.....	6	60.0	23.3	16.2
75 to 100 per cent.....	17	74.8	20.4	4.8
Total.....	152	56.1	29.9	14.0

#### TURNOVER

In Tables 38 and 39 data concerning stock turnover are set forth for 276 stores which supplied the necessary figures for these computations. The turnover figures have been computed in the conventional way—that is to say, by a comparison of cost of goods sold during 1929 with the average inventory value for 1929. The latter

figure was arrived at by taking the average value of inventories at the beginning and the end of the year. Cost of goods does not include incoming freight or express charges.

In Table 38 the figures are given with stores grouped according to annual net sales. A slight, and almost consistent, rise is to be noted in the median turnover figures from the small stores up to the large ones.

TABLE 38.—TURNOVER

Net sales	Stores	Annual turns			
		Range	First quartile point	Median	Third quartile point
Less than \$10,000.....	34	0.3- 3.5	0.6	0.8	1.2
\$10,000 to \$24,999.....	69	2- 2.6	.5	.8	1.1
\$25,000 to \$49,999.....	63	3- 3.4	.6	.9	1.2
\$50,000 to \$99,999.....	53	2- 4.2	.8	1.1	1.5
\$100,000 to \$249,999.....	33	1.5-26.1	.8	1.0	1.8
\$250,000 to \$499,999.....	13	.7- 2.2	.8	1.1	1.5
\$500,000 or more.....	11	.7- 1.5	.8	1.0	1.3
Total.....	276	1.2-26.1	.7	.9	1.3

<sup>1</sup> This unusually high figure of 26.1 applies to one store doing no installment business.

In Table 39 stock turnover figures are given for the same group of 276 stores classified in accordance with the percentage of installment business done. A consistent and very noticeable rise in the median turnover figure is found as the proportion of installment-business increases.

TABLE 39.—RELATION BETWEEN TURNOVER AND INSTALLMENT BUSINESS

Installment business	Stores	Annual turns			
		Range	First quartile point	Median	Third quartile point
Not specified.....	36	0.3- 3.5	0.7	1.0	1.4
None.....	158	2-26.1	.6	.8	1.2
Less than 25 per cent.....	36	2- 1.7	.6	.9	1.2
25 to 49 per cent.....	12	4- 3.1	.7	.9	1.8
50 to 74 per cent.....	13	8- 2.1	1.0	1.3	1.9
75 to 100 per cent.....	21	6- 3.3	1.1	1.4	1.9
Total.....	276	2-26.1	.7	.9	1.3

## SOURCES OF GOODS PURCHASED

A section of the questionnaire was devoted to sources for purchases of goods for resale during 1929. Five categories were set up for recording the data, as follows: Manufacturers, wholesalers, importers, from other sources, and own shop (goods made on the premises).

While a large number of stores supplied figures for total purchases during the year 1929, only a few gave the detailed figures. Table 40 sets forth the result of a study of these detailed figures.

TABLE 40.—SOURCES OF MERCHANDISE

Net sales	Stores	Percentages from—				
		Manufac- turers	Whole- salers	Import- ers	Other sources	Own shop
Less than \$5,000.....	19	3.7	93.8	0.4	1.0	1.1
\$5,000 to \$9,999.....	27	10.5	77.2	5.6	6.0	.6
\$10,000 to \$24,999.....	76	29.3	58.4	9.1	2.6	.6
\$25,000 to \$49,999.....	52	32.1	50.1	11.7	5.0	1.0
\$50,000 to \$99,999.....	40	42.1	41.8	11.4	3.0	1.7
\$100,000 to \$249,999.....	24	46.1	19.4	14.8	13.6	6.1
\$250,000 to \$499,999.....	11	46.7	23.7	27.0	1.1	1.6
\$500,000 or more.....	8	43.3	4.7	19.8	18.3	13.9
Total.....	257	41.4	25.0	16.9	10.2	6.5

Comparisons in this table may best be drawn by reading vertically down each of the percentage columns. Starting with the goods purchased direct from manufacturers, it will be seen that the very small stores purchase very few goods in that way. As stores increase in size, the percentage of goods purchased from manufacturers rises very rapidly and noticeably until it reaches the last group, composed of very large stores, where there is a slight recession. It may be well to point out at this point, however, that this slight percentage decrease in purchases from manufacturers among the very large stores is more than compensated by the manufacturing actually done within the store itself, as shown by the figure given in the classification "own shop."

Exactly the opposite trend is the case with goods from wholesalers. The very small stores indicate a very high proportion of goods purchased from that source; as stores become larger the percentage figures decline very noticeably, with one minor exception, right up to the group of very large stores.

## DISCOUNTS TAKEN

Provision was made in the questionnaire for recording the amount of discounts taken on merchandise purchased in 1929. These data are presented in Table 41.

Comparisons among the groups of stores may best be drawn through a study of the percentage figures in the last column of the table. It will be observed that the highest percentage discount occurred among the very small stores, with a gradual decrease up to the stores doing between \$100,000 and \$250,000 in annual business. Thereafter there is a slight increase.

While it is not possible to demonstrate specifically just why that condition prevails, considerable light may be thrown on the situation through a study of these data in conjunction with those given in the preceding section concerning the sources of goods purchased, as shown in Table 40. It will be recalled that, generally speaking, purchases made by very small stores are made almost exclusively from wholesalers, with very little from manufacturers or importers. As stores increase in size the percentage of purchases from wholesalers gradually decreases, while those from manufacturers or importers increase. The



basic percentage of discount possible through purchases from wholesalers is, for the most part, greater than that which may be secured through purchases from manufacturers or importers. This, of course, does not necessarily mean that purchases from wholesalers are "cheaper" than those from manufacturers or importers. However, the fact remains that the primary discount is usually greater in the former case, and, on that account, the percentage discount on such purchases is naturally greater.

It remains to explain the probabilities which govern the gradually rising percentage discount among the larger stores. These stores, for the most part, make purchases from manufacturers and importers on a large scale, as compared with those from wholesalers. In view of the discussion presented in the preceding paragraph, it would seem reasonable to suppose that the percentage discount should decrease rather than increase. However, it is quite likely that, in view of the greater volume of purchases, these larger stores are able to secure a higher rate of discount than the small stores which purchase from the same sources. This condition, it is entirely likely, accounts for the consistent rise in the percentage discount shown among the three groups of stores at the upper end of the range of annual net sales.

TABLE 41.—DISCOUNTS TAKEN ON 1929 PURCHASES

Net sales	Stores	Purchases	Discount	
			Amount	Per cent
Less than \$10,000.....	42	\$157,500	\$4,960	3.2
\$10,000 to \$24,999.....	73	643,400	18,050	2.8
\$25,000 to \$49,999.....	57	1,135,000	31,810	2.8
\$50,000 to \$99,999.....	55	2,064,900	53,310	2.6
\$100,000 to \$249,999.....	37	3,429,100	70,770	2.1
\$250,000 to \$499,999.....	16	2,756,000	62,020	2.3
\$500,000 or more.....	11	6,512,300	174,940	2.7
Total.....	291	16,698,200	415,860	2.5

## STANDARD AND NOVELTY MERCHANDISE

Each store was asked to estimate the percentage of merchandise carried in stock which would ordinarily be classified as standard or novelty in its nature. A considerable number of stores supplied these estimates, the results of which are set forth in the following two tables. In Table 42 these data are given with stores arranged in net sales groups.

There is a well-marked distinction among the groups. Generally speaking, as stores increase in size the percentage of merchandise classified as standard increases; conversely, the percentage of merchandise classified as novelty decreases. Among the groups in the table there is one marked exception to that general situation; the 16 stores constituting the group above \$500,000 in annual net sales had an average percentage of standard merchandise somewhat below that of the three net sales groups immediately preceding.

TABLE 42.—PROPORTION OF STANDARD AND NOVELTY GOODS BY SIZE GROUPS

Net sales	Stores	Per cent standard	Per cent novelty
Less than \$5,000.....	51	82.8	17.2
\$5,000 to \$9,999.....	89	83.9	16.1
\$10,000 to \$24,999.....	243	85.1	14.9
\$25,000 to \$49,999.....	172	84.5	15.5
\$50,000 to \$99,999.....	130	83.4	11.6
\$100,000 to \$249,999.....	77	87.9	12.1
\$250,000 to \$499,999.....	28	92.0	8.0
\$500,000 and more.....	16	85.1	14.9
Total.....	806	85.8	14.2

These data are presented in a similar manner in Table 43, this time with stores grouped according to the population of the cities or towns in which they are located. There is no consistent tendency for the average percentage of standard merchandise to increase or decrease as population units become larger. Only one of the groups shows a percentage substantially different from that of the average for the entire group, namely, the one covering a range of 100,000 to 250,000 in population. There is no apparent reason why this particular difference should exist; possibly the stores in that group by chance carried an inventory of stock slightly different from that to be found among the other groups.

TABLE 43.—PROPORTION OF STANDARD AND NOVELTY GOODS BY CITY-SIZE GROUPS

Population	Stores	Per cent standard	Per cent novelty
Less than 5,000.....	163	83.7	16.3
5,000 to 9,999.....	82	85.5	14.5
10,000 to 24,999.....	112	85.4	14.6
25,000 to 49,999.....	76	85.3	14.7
50,000 to 99,999.....	61	86.5	13.5
100,000 to 249,999.....	80	89.2	10.8
250,000 to 499,999.....	69	86.6	13.4
500,000 to 999,999.....	46	86.6	13.4
1,000,000 or more.....	77	84.0	16.0
Not specified.....	40	89.1	10.9
Total.....	806	85.8	14.2

## MARK DOWNS

One section of the questionnaire was set aside for recording the articles, or kinds of merchandise, on which mark-downs were greatest in clearance sales or other instances in which prices were reduced. Four blank spaces were provided for entering these items, and several hundred stores supplied this information. In so far as possible, each entry was classified specifically in one of 28 categories set up after a preliminary study of about 200 questionnaires. However, in many instances items were reported in a very general way—that is to say, the item reported might reasonably be classified in any one of several categories. On that account, the data set forth in Table 44 are general rather than specific. It is obvious that there is a considerable amount of overlapping among categories.

The figures given in the table are those tabulated from 462 stores, each one of which reported on one or more kinds of merchandise which was subject to mark down in that store.

As indicated in a preceding paragraph, there is a great deal of overlapping among the categories set up in this table. It is obvious, for example, that "novelties" probably includes items which might properly be otherwise classified; the same is true of "gifts," "novelty jewelry," and several other classifications. The miscellaneous classification, which includes all of those items not to be found in the other categories in the table, accounts for a considerable number of other items which were mentioned only a few times; among these were such things as novelty bags, art goods, gold jewelry, toilet ware, broken lines, pottery, ring mountings, obsolete silver, sterling silver, musical instruments, gentlemen's jewelry, and solid gold watches.

It is expected, of course, that novelty items would be the ones subject to the greatest degree of mark down. So far as reasonably specific categories are concerned, costume jewelry leads the list. Glassware is apparently subject to considerable mark down, as well, as are also leatherware and chinaware. In spite of the fact that the data set forth in this particular table are not so specific or definite as they might be, they give a fairly good general idea of practices with respect to mark downs.

TABLE 44.—MERCHANDISE MOST SUBJECT TO MARK DOWNS

Kind of merchandise	Number of times mentioned	Per cent of total times mentioned	Kind of merchandise	Number of times mentioned	Per cent of total times mentioned
Novelties.....	320	28.1	Leatherware.....	42	3.7
Costume jewelry.....	125	11.0	China.....	42	3.7
Glassware.....	75	6.6	Fancy stone rings.....	35	3.1
Gifts.....	72	6.3	Clocks.....	19	1.7
Jewelry.....	57	5.0	Diamonds.....	18	1.6
Silverware.....	53	4.7	Miscellaneous.....	192	16.9
Novelty jewelry.....	44	3.8			
Watches.....	44	3.8	Total.....	1,133	100.0

## GROSS MARGIN

In Table 45 gross margin on merchandise sold by 281 stores during 1929 is set forth, with stores grouped according to annual net sales. These figures were arrived at by a series of computations which entailed the use of inventory value at the beginning of the year, cost of goods purchased during the year, inventory value at the end of the year, and total net sales for the year. These data were given, in complete form, only by the number of stores indicated in the table.

The figures given in the table are derived from a series of calculations. Many stores reported total net sales without indicating separately the amounts derived from repair sales. In these instances it was obviously impossible to compute gross margin of profit on merchandise only. On that account a preliminary calculation was made in the form of a ratio between cost of goods sold and total net sales, including repair sales. After this preliminary step an average ratio for each of the net sales groups was computed. This average ratio, of course, in each instance was higher than it would have been had only merchandise

sales been considered. The effect of repair sales was thereafter eliminated by applying the reducing effect of the percentage of repair sales to total net sales for each group. The resulting figures of gross margin, so far as averages are concerned, are entirely valid. The method described would not be reliable if applied to median or quartile figures, and on that account no median or quartile figures are given.

TABLE 45.—AVERAGE GROSS MARGIN, BY SIZE GROUPS

Net sales	Stores	Average gross margin, per cent	Net sales	Stores	Average gross margin, per cent
Less than \$10,000.....	33	26.1	\$250,000 to \$499,999.....	15	49.2
\$10,000 to \$24,999.....	71	35.2	\$500,000 or more.....	10	37.0
\$25,000 to \$49,999.....	61	35.2			
\$50,000 to \$99,999.....	56	43.9	Total.....	281	42.9
\$100,000 to \$249,999.....	35	40.3			

The very narrow margin of gross profit under which the small stores operated necessitates comment. The majority of these stores, it must be remembered, do a very large percentage of their total business in repair work; in many instances sales of merchandise are only incidental to the operation of the store, and frequently the kinds of merchandise sold are such that a high mark-up is seldom the rule. The small margin of profit on merchandise sales is compensated for by the much higher margin realized on repair sales, and the likelihood of a net loss on the total operation of the business becomes less on that account.

In Table 46 the same information is given, this time with stores grouped according to the percentage of installment business done.

A study of the gross-margin figures among the groups treated in this table shows a distinct difference among the groups, with a tendency for gross margin to increase with the proportion of installment business. While the change in the gross-margin figure is not consistent, the figures for the stores reporting a very high percentage of installment business are very noticeably greater than those for the stores which do no installment business. This does not necessarily mean that the installment stores are realizing a higher net profit than those which do no installment business; many other factors, such as operating expense, credit loss, turnover, and so forth, must necessarily be considered.

TABLE 46.—RELATION BETWEEN GROSS MARGIN AND INSTALLMENT BUSINESS

Installment business	Stores	Average gross margin, per cent	Installment business	Stores	Average gross margin, per cent
Not specified.....	41	42.7	50 to 74 per cent.....	11	44.0
None.....	156	41.4	75 to 100 per cent.....	23	55.0
Less than 25 per cent.....	36	40.0			
25 to 49 per cent.....	14	47.5	Total.....	281	42.9

Gross-margin figures for these 281 stores are again presented in Table 47, with stores grouped according to size of city. Generally speaking, the gross margin increased in direct proportion with the population.

TABLE 47.—RELATION BETWEEN GROSS MARGIN AND SIZE OF CITY

Population	Stores	Average gross margin, per cent	Population	Stores	Average gross margin, per cent
Less than 5,000.....	48	36.2	250,000 to 49,999.....	26	44.5
5,000 to 9,999.....	27	37.2	500,000 to 999,999.....	22	46.2
10,000 to 24,999.....	32	39.3	1,000,000 or more.....	36	46.1
25,000 to 49,999.....	23	37.3	Not classified.....	19	42.4
50,000 to 99,999.....	19	41.8	Total.....	281	42.9
100,000 to 249,999.....	29	41.9			

In Table 48 gross-margin figures are given for each of the 15 classifications of stock discussed previously in connection with inventory figures. For detailed specification concerning the meaning of the terms used to describe these classifications, reference should be made to page 29, in the section on inventories.

It will be noted that, in both average and median figures, the order of rank of the first six classifications is identical—repairs and engraving, optical goods, other jewelry, costume jewelry, gold and platinum jewelry, and watches. There is a minor interchange of position among the next seven classifications, but the last two items are the same in each case—clocks and sterling silverware.

TABLE 48.—GROSS MARGIN BY COMMODITIES

Classification	Stores	Gross margin, per cent			
		First quartile point	Median	Third quartile point	Average
Diamonds and other precious stones.....	81	41.0	42.4	47.4	42.6
Jewelry, gold and platinum, solid and front.....	62	41.8	45.8	52.4	45.0
Other jewelry, excluding costume jewelry.....	32	44.4	49.3	51.4	46.8
Costume jewelry.....	27	41.3	47.5	51.1	45.1
Watches, other than jeweled watches.....	71	39.9	43.3	47.1	43.5
Electric clocks.....	14	38.7	40.5	41.4	39.8
Clocks, other than electric clocks.....	51	36.4	38.7	42.0	38.0
Sterling silverware.....	56	34.9	38.4	40.2	36.8
Plated silverware.....	62	39.6	43.0	47.1	42.5
Glass and chinaware, lamps, furniture.....	47	31.1	42.5	47.0	38.8
Optical goods.....	36	42.4	53.7	62.4	52.4
Pens, pencils, and stationery.....	56	36.2	40.5	44.1	38.5
Gifts, novelty and souvenir items.....	41	34.1	41.4	44.3	39.4
Other merchandise.....	54	32.4	40.9	45.9	38.6
Repairs and engraving.....	72	39.3	55.8	71.4	55.0

While it is true that, in one sense of the term, a high gross-margin figure indicates high profit—which, in turn, partially determines the desirability of handling any given kind of merchandise—it must be remembered that there are several other factors which enter into the situation. One of these, obviously, is turnover. Certain kinds of merchandise which turn rapidly and which, consequently, do not involve the probability of eventually carrying a large amount of dead stock might be handled with greater profit at a lower margin than those which turn very slowly. Certain kinds of costume jewelry, for example, must be moved quickly or else be sold at a great sacrifice. Exactly the opposite situation prevails, of course, in connection with the classification "diamonds and other precious stones,"

independent of the mountings. In that instance, although the stock generally remains active, a disproportionately large investment is required. Consequently, turnover is apt to be considerably lower than in various other lines.

Turnover figures are not available for each of the 15 classifications. However, through a study of Tables 34 and 35, along with the figures given in the table just preceding, a general evaluation of the relation between turnover and gross margin may be made.

## CREDIT LOSS

Two items in the questionnaire were set aside for recording credit losses in 1929—as a percentage of net sales, and as an actual amount in dollars. More stores were able to supply the percentage figures than were able to give the exact amount of credit loss in dollars. It was found, however, that many of the percentage figures were mere estimates which, in many cases, were considerably at variance with an actual percentage loss as shown by comparison of the exact amount of loss and total net sales. On that account it was necessary to discard the percentage figures as given in the questionnaires, and to base the data in this report entirely on the actual amount of loss reported. Only stores which gave definite figures on credit loss were included. Some of the stores definitely reported no credit loss whatever; all of these have been included.

In Table 49 credit losses are set forth with stores arranged according to net sales groups.

TABLE 49.—CREDIT LOSS, BY SIZE GROUPS

Net sales	Number of stores	Credit loss, per cent of net sales			
		First quartile point	Median	Third quartile point	Average
Less than \$5,000.....	47	0.00	0.58	3.06	1.61
\$5,000 to \$9,999.....	76	.00	.66	1.42	.98
\$10,000 to \$24,999.....	201	.00	.51	1.15	.83
\$25,000 to \$49,999.....	160	.30	.57	1.30	1.14
\$50,000 to \$99,999.....	132	.22	.79	1.99	1.54
\$100,000 to \$249,999.....	76	.30	.93	2.85	1.78
\$250,000 to \$499,999.....	27	.20	.81	4.30	2.12
\$500,000 or more.....	23	.08	.23	.66	1.00
Total.....	742	.13	.61	1.46	1.43

By all means the most valuable comparisons which may be drawn through the data given in this table may be made by studying the median figures. The values given in it are more nearly representative of typical conditions than those which will be found in the average column. A very considerable discrepancy will be noticed between the median and average figures throughout the entire table. In every instance the average proves to be very much higher than the median; this condition arises through the fact that the relatively small number of very large percentage losses have a disproportionate weight in determining the average figure.

Of the eight size groups, the one which includes the very large stores shows by far the most favorable situation so far as credit loss



is concerned. Perhaps the credit regulations of these very large stores are more stringent than those in the smaller stores; at least they are applied more effectively.

Only three other groups show any considerable amount of deviation from the general typical figure. These three groups of stores, ranging in annual net sales from \$50,000 up to \$500,000, are considerably above the typical figure. The reason is, in part, that many of the stores doing a large percentage of installment business are to be found in those groups.

Credit losses for the same 742 stores have been set forth in another way in Table 50.

TABLE 50.—RELATION BETWEEN CREDIT LOSS AND INSTALLMENT BUSINESS

Installment business	Stores	Credit loss, per cent of net sales			
		First quartile point	Median	Third quartile point	Average
Not specified.....	158	0.23	0.62	1.55	0.99
None.....	404	.00	.37	.95	.61
Less than 25 per cent.....	77	.24	.48	1.18	.85
25 to 49 per cent.....	22	.63	1.13	1.46	.89
50 to 74 per cent.....	30	1.19	2.33	4.54	2.85
75 to 100 per cent.....	51	2.95	4.38	7.86	5.88
Total.....	742	.13	.61	1.46	1.43

In this table, as in the preceding one, comparisons among the groups of stores may best be drawn through a study of the median figures. It is reasonable to assume that the stores which gave no specification concerning installment business are about the same in general character as the total group which did give specific information on that particular point. This assumption is well verified through the fact that the median percentage credit loss indicated for this particular group of stores proves to be almost identical with that shown for the entire group as a whole—0.62 per cent as compared with 0.61 per cent. It will be noticed that the stores which did no installment business whatever had a typical percentage credit loss considerably below that of the group as a whole. Thereafter, as installment business becomes larger, the typical percentage credit loss rises very noticeably and consistently. Once again a considerable discrepancy will be found between the median and the average figures of percentage loss; the discrepancy in this instance is not so great as it was in the preceding table since the very stores which caused the large difference in the former instance are now the ones which are being used in the control position.

The difference in credit loss sustained by stores doing installment business, and those not doing installment business, is shown in a very striking manner in this table; this is particularly true in comparing the typical figure for the stores doing no installment business with the one shown for stores doing more than three-fourths on an installment basis.

The same data are given in Table 51, with stores arranged according to the population of the city or town in which they are located.

TABLE 51.—RELATION BETWEEN CREDIT LOSS AND SIZE OF CITY

Population	Stores	Credit loss, per cent of net sales			
		First quartile point	Median	Third quartile point	Average
Less than 5,000.....	124	0.14	0.54	1.21	0.92
5,000 to 9,999.....	67	.46	.82	1.51	1.05
10,000 to 24,999.....	94	.30	.47	1.22	1.08
25,000 to 49,999.....	77	.20	.58	1.47	1.41
50,000 to 99,999.....	58	.27	.67	1.38	1.02
100,000 to 249,999.....	72	.12	.43	1.32	1.14
250,000 to 499,999.....	67	.23	.79	2.88	1.49
500,000 to 999,999.....	47	.15	.46	1.31	.67
1,000,000 or more.....	88	.00	.22	2.00	2.00
Not specified.....	48	.00	.80	4.21	1.96
Total.....	742	.13	.61	1.46	1.43

In this case there appears to be only one outstanding characteristic which deserves special comment, namely, that the credit loss in stores located in very large cities is much below the typical figure for the group as a whole and considerably less than that reported in any other city-size group. This, of course, may mean that credit terms are much more rigid in the large cities, or that they are more effectively enforced, or that a more effective collection system is operated.

The low median figure for that group, and particularly the wide discrepancy which exists between it and the corresponding average figure, requires further comment. An inspection of the original data submitted by this group of stores brings to light the reason for both of these things; 34 of these 88 stores operated on a strictly cash basis, and, on that account, had no credit loss whatever. On the other hand, 11 of the stores reported a credit loss in excess of 5 per cent. The influence of the 34 stores reporting no loss outweighs the influence of the 11 stores reporting a very high credit loss, so far as the computation of the median figure is concerned; but the high credit losses reported by the 11 stores has a very disproportionate weight in raising the figure when computations for average loss are made.

Still another study of credit loss is present in Table 52, with the stores grouped according to geographic location. One store failed to specify location by State and, on that account, could not be classified in any of the groups treated in this table.

TABLE 52.—CREDIT LOSS, BY GEOGRAPHIC LOCATION

Region	Stores	Credit loss, per cent of net sales			
		First quartile point	Median	Third quartile point	Average
New England.....	35	0.00	0.24	0.82	0.32
Central Atlantic.....	188	.00	.33	1.09	1.44
Midwest.....	236	.20	.70	1.58	1.83
Southeast.....	51	.28	.99	1.60	1.07
Gulf Southwest.....	60	.24	.79	1.56	.82
West Midcontinent.....	41	.31	.64	1.00	.93
Central Northwest.....	27	.14	.49	1.32	1.48
Pacific Northwest.....	47	.60	1.08	2.50	3.22
Pacific Southwest.....	56	.32	.70	2.00	1.06
Total.....	741	.13	.61	1.46	1.43

It will be noted that there are distinct differences among the various geographic groups. New England, the Middle Atlantic States, and the Central Northwest all show typical figures which are considerably below that for the whole country. The Pacific Northwest shows a credit-loss figure very much above the common condition, while the Southeast, to a lesser degree, is also considerably above.

Particular significance attaches itself to the high figure reported by the Pacific Northwest. It will be recalled that the trend of sales among the stores in that region has been very markedly upward over a period of six years, as contrasted with a general downward trend for the country at large. There appears to be some ground for the belief that these two things have gone hand in hand—that the increase in business has been brought about, at least in part, by the very liberal extension of credit in that particular part of the country, and that that practice has resulted in a considerably higher percentage of credit loss than is found elsewhere in the country.

The high loss figures have not been caused through the presence of a disproportionately large number of installment stores in that particular geographic group. On the contrary, a considerably smaller percentage of installment stores reported in this survey from the Pacific Northwest than from the country at large.

#### ADVERTISING EXPENDITURES

In the following five tables data are shown concerning advertising expenditures. In Table 53 showing data on advertising expenditures for five years, the stores are grouped according to annual net sales.

TABLE 53.—ADVERTISING EXPENDITURES OVER 5-YEAR PERIOD

Net sales	Stores	1925		1926		1927		1928		1929	
		Amount	Per cent of 1925	Amount	Per cent of 1925	Amount	Per cent of 1925	Amount	Per cent of 1925	Amount	Per cent of 1925
Less than \$10,000.....	60	\$13,240		\$13,020	98.3	\$12,410	93.7	\$13,340	100.8	\$12,700	95.9
\$10,000 to \$24,999.....	138	63,110		67,040	106.2	65,390	103.6	69,170	109.6	68,910	104.4
\$25,000 to \$49,999.....	123	128,730		116,820	90.7	125,390	97.4	122,830	95.4	118,190	91.8
\$50,000 to \$99,999.....	100	217,780		236,790	108.7	233,580	107.3	230,210	105.7	254,200	116.7
\$100,000 to \$249,999.....	60	367,200		405,140	110.3	423,090	115.2	450,010	122.6	466,810	127.1
\$250,000 to \$499,999.....	22	361,390		380,400	105.3	347,580	96.2	350,440	97.0	354,580	98.1
\$500,000 or more.....	23	788,210		719,150	91.2	810,140	102.9	822,690	104.4	896,530	113.8
Total.....	526	1,939,630		1,938,360	99.9	2,026,580	104.5	2,058,690	106.1	2,169,220	111.8

It will be noted that the general trend of advertising expenditures has been upward since 1925, especially after the first year; the 1929 figure indicating that there has been an increase of nearly 12 per cent in the period of five years.

Generally speaking, there has been but little change in the advertising expenditures of stores under \$50,000 in annual net sales. In the two groups of stores just above those, however, it will be noted that there has been a considerable increase, particularly in the group of stores reporting annual net sales from \$100,000 up to \$250,000. In contrast, those reporting annual net sales of \$250,000 to \$500,000 show a relatively small change. Those which pass \$500,000, however, exhibit a considerable and consistent increase except for 1926.

Out of all the stores reporting in the survey, 1,107 supplied definite figures concerning advertising expenditures for 1929. Many stores definitely specified that nothing was spent on advertising. All such stores have been included in the calculations.

In Table 54 advertising data for this group of 1,107 stores are given, with stores grouped according to annual net sales.

TABLE 54.—ADVERTISING EXPENDITURES IN 1929, BY SIZE GROUPS

Net sales	Stores	Amount spent on advertising				
		First quartile	Median	Third quartile	Average amount	Per cent of net sales
Less than \$5,000.....	78	\$20	\$50	\$100	\$75	2.4
\$5,000 to \$9,999.....	123	80	150	250	179	2.4
\$10,000 to \$24,999.....	328	150	300	570	407	2.4
\$25,000 to \$49,999.....	242	410	760	1,250	937	2.6
\$50,000 to \$99,999.....	176	1,190	2,070	3,420	2,662	3.8
\$100,000 to \$249,999.....	97	2,550	5,010	8,390	6,642	4.3
\$250,000 to \$499,999.....	35	5,070	9,480	21,260	16,036	4.7
\$500,000 or more.....	28	14,150	27,410	51,090	36,762	4.3
Total.....	1,107	160	500	1,370	2,793	3.9

Some confusion may arise through the unusually large discrepancy to be found between the median and average amounts spent for advertising, considering the entire group of 1,107 stores as a whole. For an explanation of the reasons which contribute to such a discrepancy, the reader is referred to the section of this report entitled "Explanation of statistical terms," and particularly to p. 4. Both the median and average figure have been given in this case, since each of them has its particular value for certain purposes of comparison. However, the median amounts indicated in the table may be accepted as representing the more nearly typical advertising expenditures for each group and for the total group.

In Table 55 advertising expenditures for the same stores are set forth with the stores grouped according to the percentage of installment business done.

TABLE 55.—RELATION BETWEEN ADVERTISING EXPENDITURES AND INSTALLMENT BUSINESS

Installment business	Stores	Net sales	Advertising expenditures	
			Amount	Per cent of net sales
Not specified.....	273	\$15,178,500	\$515,930	3.4
None.....	601	41,674,800	1,211,403	2.9
Less than 25 per cent.....	104	6,952,900	276,790	4.0
25 to 49 per cent.....	35	2,580,800	84,820	3.3
50 to 74 per cent.....	37	3,141,100	184,770	5.9
75 to 100 per cent.....	57	8,798,800	817,780	9.3
Total.....	1,107	78,326,900	3,091,490	3.9



Comparisons among the groups of stores treated in this table may best be drawn through a study of the percentage ratio between advertising expenditures and net sales. The stores in the group giving no specification concerning installment business show a percentage ratio slightly below the average ratio for the group of stores as a whole. It will be noted that the group of stores reporting no installment business whatever falls materially below the total average in this respect. Thereafter, in the next two groups, there is slight deviation from the total average figure, while the two groups of stores doing a majority of business on an installment basis surpass the average figure by a large margin.

In Table 56 the same information is given, with stores grouped according to the population of the cities or towns in which they are located.

In this table, as in the preceding one, comparisons may best be drawn through a study of the percentage figures in the last column of the table. Beginning with stores located in small towns, a consistent rise in proportion to the population will be noted in the percentages spent on advertising up to cities approaching 1,000,000 in population. This upward trend may be accounted for to a large degree by the fact that the stores located in the larger cities are actually larger stores, as adjudged by annual net sales, and the percentage ratio of advertising expenditures to total net sales rises as the stores become larger in volume of business, as shown in Table 54. The slight decrease in the percentage ratio in cities of 1,000,000 or more population may be accounted for, in part, through the fact that many of the stores in this group, although located in large cities, are, very small stores.

TABLE 56.—RELATION BETWEEN ADVERTISING EXPENDITURES AND SIZE OF CITY

City class	Stores	Net sales	Advertising expenditures	
			Amount	Per cent of net sales
Less than 5,000.....	210	\$2,496,200	\$51,410	2.1
5,000 to 9,999.....	110	2,174,100	43,130	2.0
10,000 to 24,999.....	157	4,567,400	131,570	2.9
25,000 to 49,999.....	114	5,453,300	207,910	3.8
50,000 to 99,999.....	80	5,726,100	195,460	3.4
100,000 to 249,999.....	106	9,337,000	315,020	3.4
250,000 to 499,999.....	87	15,207,100	695,610	4.6
500,000 to 999,999.....	56	9,038,500	415,280	4.6
1,000,000 or more.....	111	17,980,400	791,120	4.4
Not classified.....	76	6,346,800	244,950	3.9
Total.....	1,107	78,326,900	3,091,490	3.9

In Table 57 data are given for 688 stores which supplied detailed advertising expenditures for 1929, according to the advertising mediums used. The stores are arranged according to net sales.

TABLE 57.—ADVERTISING MEDIUMS USED IN 1929

Net sales	Stores	Newspaper			Magazine			Billboards		
		Number of stores	Per cent of stores	Per cent of amount spent	Number of stores	Per cent of stores	Per cent of amount spent	Number of stores	Per cent of stores	Per cent of amount spent
Less than \$10,000.....	90	79	87.8	65.6	6	6.7	3.0	6	6.7	.9
\$10,000 to \$24,999.....	201	185	92.0	67.6	17	8.5	1.8	19	9.5	2.1
\$25,000 to \$49,999.....	168	148	88.1	61.2	18	10.7	1.9	27	16.1	4.0
\$50,000 to \$99,999.....	121	105	86.8	61.6	14	11.6	1.3	28	23.1	4.0
\$100,000 to \$249,999.....	61	57	93.4	66.8	13	21.3	2.1	14	23.0	2.5
\$250,000 to \$499,999.....	23	19	82.6	56.3	5	21.7	3.6	6	26.1	1.2
\$500,000 or more.....	24	21	87.5	50.4	14	58.3	13.4	4	16.7	.7
Total.....	688	614	89.2	57.7	87	12.6	6.5	104	15.1	1.9

Net sales	Stores	Street-car signs			Direct mail			Store souvenirs		
		Number of stores	Per cent of stores	Per cent of amount spent	Number of stores	Per cent of stores	Per cent of amount spent	Number of stores	Per cent of stores	Per cent of amount spent
Less than \$10,000.....	90	2	2.2	.7	34	37.8	14.5	15	16.7	4.1
\$10,000 to \$24,999.....	201	9	4.5	1.0	91	45.5	13.3	34	17.0	1.7
\$25,000 to \$49,999.....	168	5	3.0	.9	102	60.7	17.7	44	26.2	4.2
\$50,000 to \$99,999.....	121	10	8.3	.5	82	67.8	21.7	26	21.5	1.9
\$100,000 to \$249,999.....	61	8	13.1	2.0	47	77.0	16.5	15	24.6	2.3
\$250,000 to \$499,999.....	23	2	8.7	1.0	21	91.3	25.8	8	34.8	.9
\$500,000 or more.....	24	2	8.4	1.5	23	95.8	19.9	9	37.5	2.1
Total.....	688	38	5.5	1.3	400	58.1	20.1	151	21.9	2.0

Net sales	Stores	Radio			Other forms		
		Number of stores	Per cent of stores	Per cent of amount spent	Number of stores	Per cent of stores	Per cent of amount spent
Less than \$10,000.....	90	3	3.3	0.5	35	38.9	10.7
\$10,000 to \$24,999.....	201	8	4.0	2.2	73	36.5	10.3
\$25,000 to \$49,999.....	168	17	10.1	1.3	74	44.0	8.9
\$50,000 to \$99,999.....	121	23	19.0	1.6	45	37.2	7.4
\$100,000 to \$249,999.....	61	14	23.0	2.7	22	36.1	5.2
\$250,000 to \$499,999.....	23	6	26.1	3.6	12	52.2	7.6
\$500,000 or more.....	24	5	20.8	1.6	18	75.0	10.4
Total.....	688	76	11.0	2.1	279	40.6	8.4

A general inspection of the table indicates quite clearly that newspaper advertising was very much the preferred form, since it leads both in the number of stores using it as a medium and in the percentage of money expended. Direct-mail advertising comes second, with a material lead over the remaining mediums indicated in the table. It is interesting to note that 75 stores, constituting 11 per cent of the total, used radio in 1929, although the percentage of money spent for that form of advertising was only a little over 2 per cent.

## RETURNS AND ALLOWANCES

Three items in the questionnaire provided for a record of the amount of time allowed for the return of goods. The returns on this point are given in Table 58.

TABLE 58.—TIME ALLOWED FOR RETURNING GOODS

Period	Stores	Per cent of stores reporting	Period	Stores	Per cent of stores reporting
<b>For refund:</b>			<b>For credit—Continued.</b>		
1 day.....	41	14.8	1 year.....	3	0.8
2 days.....	18	6.5	Over 1 year.....	5	1.4
3 days.....	25	9.0			
5 days.....	23	8.3	<b>Total reporting.....</b>	<b>366</b>	<b>100.0</b>
1 week.....	117	42.2			
2 weeks.....	11	4.0	<b>For exchange:</b>		
1 month.....	42	15.2	Under 1 week.....	97	22.7
<b>Total reporting.....</b>	<b>277</b>	<b>100.0</b>	1 to 2 weeks.....	137	32.1
			2 to 3 weeks.....	37	8.7
<b>For credit:</b>			3 to 4 weeks.....	3	.7
Under 1 week.....	91	24.9	1 to 2 months.....	110	25.8
1 to 2 weeks.....	125	34.2	2 to 3 months.....	9	2.1
2 to 3 weeks.....	22	6.0	3 to 6 months.....	14	3.3
3 to 4 weeks.....	3	.8	6 months to 1 year.....	4	.9
1 to 2 months.....	91	24.9	1 year.....	6	1.4
2 to 3 months.....	13	3.6	Over 1 year.....	10	2.3
3 to 6 months.....	11	3.0			
6 months to 1 year.....	2	.5	<b>Total reporting.....</b>	<b>427</b>	<b>100.0</b>

## DELIVERY METHODS

Eight means by which goods are ordinarily delivered were printed in the questionnaire. Instructions were given to indicate the methods used by checking those which were of minor importance and double checking those which were most frequently used by the store. The data set forth in Table 59 show the manner in which 878 stores reported on these items. The stores are arranged according to net sales groups.

Comparison among the various net sales groups may be drawn through a study of the figures either horizontally or vertically. Considering first the agencies of delivery which are of outstanding importance, it will be noted that delivery by messenger starts out as being of no importance among the small stores, rises to a position of considerable importance among the stores of intermediate size, and then drops off again among the large stores. Automobile delivery starts with the small stores as an agency of relatively small importance, but increases considerably and consistently as stores increase in size, up to the very large stores, where there is a slight decrease in the use of that agency. Generally speaking, postal service of one form or another seems to account for the very large bulk of deliveries made by stores, almost irrespective of size.

TABLE 59.—DELIVERY METHODS USED

Net sales and use of delivery method	Per cent of stores using—						
	Messenger	Motor cycle	Auto-mobile	Mail	Parcel post	Outside agency	Registered mail Ex-press
<b>Less than \$5,000 (40 stores):</b>							
Infrequent or none.....	80.0	100.0	77.5	72.5	22.5	97.5	75.0
Minor.....	20.0	.0	15.0	20.0	55.0	2.5	62.5
Principal.....	.0	.0	7.5	7.5	22.5	.0	15.0
<b>\$5,000 to \$9,999 (72 stores):</b>							
Infrequent or none.....	80.6	97.2	73.6	66.9	29.2	95.8	63.9
Minor.....	19.4	2.8	16.7	33.9	54.1	4.2	34.7
Principal.....	.0	.0	9.7	4.2	16.7	.0	1.4
<b>\$10,000 to \$24,999 (253 stores):</b>							
Infrequent or none.....	64.0	98.8	57.3	60.9	32.8	96.0	62.5
Minor.....	27.3	1.2	31.2	30.4	42.3	3.6	36.7
Principal.....	8.7	.0	11.5	8.7	24.9	.4	13.0
<b>\$25,000 to \$49,999 (209 stores):</b>							
Infrequent or none.....	51.7	100.0	41.1	62.2	30.1	93.3	54.1
Minor.....	34.0	.0	42.1	32.5	50.7	4.8	42.6
Principal.....	14.3	.0	16.8	5.3	19.2	1.9	3.3
<b>\$50,000 to \$99,999 (158 stores):</b>							
Infrequent or none.....	46.2	98.1	55.7	61.4	37.3	82.9	51.9
Minor.....	30.4	.6	25.9	32.9	45.6	10.8	41.8
Principal.....	23.4	1.3	18.4	5.7	17.1	6.3	6.3
<b>\$100,000 to \$249,999 (92 stores):</b>							
Infrequent or none.....	41.3	97.8	54.3	68.5	25.0	76.1	43.5
Minor.....	42.4	2.2	26.1	29.3	59.8	14.1	52.2
Principal.....	16.3	.0	19.6	2.2	15.2	9.8	4.3
<b>\$250,000 to \$499,999 (28 stores):</b>							
Infrequent or none.....	57.1	100.0	32.1	53.6	17.9	80.3	28.6
Minor.....	25.0	.0	25.0	46.4	67.9	8.6	67.8
Principal.....	17.9	.0	42.9	.0	14.2	7.1	3.6
<b>\$500,000 or more (26 stores):</b>							
Infrequent or none.....	30.8	100.0	30.8	65.4	19.2	76.9	19.2
Minor.....	61.5	.0	34.6	26.9	57.7	7.7	65.4
Principal.....	7.7	.0	34.6	7.7	23.1	15.4	15.4
<b>All groups (878 stores):</b>							
Infrequent or none.....	54.4	98.9	53.5	62.2	30.5	90.2	54.9
Minor.....	31.0	.9	30.3	31.9	49.6	6.4	41.7
Principal.....	12.6	.2	16.2	5.9	19.9	3.4	3.4

## ADVANCE BUDGETING OF PURCHASES

An item in the questionnaire provided for recording whether or not a budget was used in planning purchases of merchandise for resale; 1,107 stores supplied information on this point. In Table 60 data on this item are set forth with stores arranged in net sales groups. A study of the table shows clearly that the use of a budget method increases both consistently and markedly as net sales increase.

TABLE 60.—USE OF ADVANCE BUDGETING OF PURCHASES

Net sales	Stores	Per cent using budget	Net sales	Stores	Per cent using budget
Less than \$5,000.....	78	5.1	\$100,000 to \$249,999.....	97	21.6
\$5,000 to \$9,999.....	127	6.3	\$250,000 to \$499,999.....	34	32.4
\$10,000 to \$24,999.....	337	8.0	\$500,000 or more.....	27	33.3
\$25,000 to \$49,999.....	242	11.6			
\$50,000 to \$99,999.....	165	18.2	<b>Total.....</b>	<b>1,107</b>	<b>12.5</b>

## CLEARANCE SALES

An item in the questionnaire dealt with the use of clearance sales as a part of the merchandising plan; 1,126 stores reported on this factor. In Table 61 the results on this point are set forth, with stores grouped according to annual net sales. An inspection of the table as a whole shows that, generally speaking, as stores increase in size there is an increasingly frequent use of clearance sales as part of the merchandising plan.

TABLE 61.—USE OF CLEARANCE SALES, BY SIZE GROUPS

Net sales	Stores	Per cent reporting clearance sales	Net sales	Stores	Per cent reporting clearance sales
Less than \$5,000.....	83	7.2	\$100,000 to \$249,999.....	98	25.5
\$5,000 to \$9,999.....	134	10.4	\$250,000 to \$499,999.....	30	33.3
\$10,000 to \$24,999.....	342	14.9	\$500,000 or more.....	27	29.6
\$25,000 to \$49,999.....	242	19.8			
\$50,000 to \$99,999.....	170	30.0	Total.....	1,126	18.9

These data are again set forth in Table 62, with stores arranged according to the population of the cities or towns in which they are located. A general inspection of the table indicates that clearance sales are less commonly used in small towns and in very large cities than they are in cities of intermediate size and are most frequently used in cities of 50,000 to 100,000 population.

TABLE 62.—USE OF CLEARANCE SALES, BY SIZE OF CITY

Population	Stores	Per cent reporting clearance sales	Population	Stores	Per cent reporting clearance sales
Less than 5,000.....	222	10.8	250,000 to 499,999.....	91	20.9
5,000 to 9,999.....	110	20.0	500,000 to 999,999.....	58	24.1
10,000 to 24,999.....	152	21.7	1,000,000 or more.....	113	11.5
25,000 to 49,999.....	106	21.7	Not specified.....	79	13.9
50,000 to 99,999.....	84	36.9			
100,000 to 249,999.....	111	21.6	Total.....	1,126	18.9

## OPERATING EXPENSES

Each store was asked to report the amount expended during the year 1929 in each of 12 classifications of store expense, and the total expense for the year. In Table 63 a percentage ratio is shown for each of these items, except interest, with respect to total net sales.

Many stores failed to report interest charges in the manner required; on that account it was considered best not to include that item in detail, since the validity of the figures would be open to question.

In many cases, stores supplied exact figures for some items and failed to do so for others. Furthermore, in some instances, discrepancies were noted in the data for a particular item, with the result that the figures were not included in the table. Great care was taken to see that only exact figures were used for these computations; that is to say, when several items were bracketed together, no attempt was made to allocate the amount among the several items involved in the bracketing.

One very unusual situation is to be noted in connection with a comparison of the two items given for salaries and wages. It would be expected that the percentage for this item among stores not paying a salary to the proprietor would be less than among those which followed the practice of paying such a salary; and that, other things being equal, this situation would obtain for stores irrespective of size, although the differences in the percentages would be expected to be larger among small stores than in the very large ones. This latter expectancy is well borne out among the groups of stores reporting annual net sales up to \$250,000. Beginning at that point,

however, the situation is reversed from what would ordinarily be expected. The apparent inconsistency was the occasion of a special investigation of the original data submitted by the stores in question. That study brought to light a condition which accounts for this reversal, namely, that the stores which reported nonpayment of a salary to proprietors were principally those whose wage scale for employees was considerably above average. The others, for the most part, proved to be stores which followed a wage scale considerably below the average for stores in general.

TABLE 63.—OPERATING EXPENSE

Item	Net sales							
	Less than \$10,000		\$10,000 to \$24,999		\$25,000 to \$49,999		\$50,000 to \$99,999	
	Stores	Per cent of sales	Stores	Per cent of sales	Stores	Per cent of sales	Stores	Per cent of sales
Rent.....	153	10.3	289	7.9	213	6.5	164	6.3
Light, water, heat, and power.....	170	2.5	311	1.6	202	1.2	160	1.1
Repairs and depreciation.....	64	2.6	172	1.6	155	1.3	132	1.2
Taxes.....	169	2.0	280	1.4	193	1.0	136	.9
Insurance.....	157	1.2	285	1.0	209	.8	156	.9
Salaries and wages:								
Stores not paying salary to manager.....	56	10.9	129	12.8	77	15.8	55	15.2
Stores paying salary to manager.....	20	37.4	100	29.3	96	25.7	89	22.9
Advertising (other than salaries).....	201	2.4	328	2.4	242	2.6	176	3.8
Freight, express, and postage.....	139	1.2	255	.9	184	.8	131	.8
Boxes and wrappings.....	110	1.0	164	.9	123	.8	96	.8
Other store supplies.....	81	1.5	153	1.2	127	1.2	97	1.3
All other expenses.....	67	3.3	187	3.2	149	3.1	133	3.8
Total expense:								
Stores not paying salary to manager.....	44	31.3	92	32.6	63	34.6	47	35.5
Stores paying salary to manager.....	12	63.1	71	49.3	84	43.0	77	43.5

Item	Net sales							
	\$100,000 to \$249,999		\$250,000 to \$499,999		\$500,000 or more		All groups combined	
	Stores	Per cent of sales	Stores	Per cent of sales	Stores	Per cent of sales	Stores	Per cent of sales
Rent.....	93	6.1	32	6.3	28	5.0	972	6.0
Light, water, heat, and power.....	89	.8	26	.7	28	.4	986	.8
Repairs and depreciation.....	84	1.0	30	1.5	26	.9	663	1.1
Taxes.....	87	1.2	31	1.1	28	1.4	924	1.2
Insurance.....	93	.9	32	.9	28	.7	960	.8
Salaries and wages:								
Stores not paying salary to manager.....	21	17.5	9	21.7	8	19.5	335	14.2
Stores paying salary to manager.....	54	23.3	21	20.2	16	17.3	396	25.6
Advertising (other than salaries).....	97	4.3	35	4.7	28	4.3	1,107	3.9
Freight, express, and postage.....	75	.8	28	.6	24	1.1	836	.9
Boxes and wrappings.....	58	.9	26	1.0	25	.7	602	.8
Other store supplies.....	50	1.0	20	.9	18	.7	546	1.0
All other expenses.....	69	3.4	25	3.2	25	4.1	655	3.6
Total expense:								
Stores not paying salary to manager.....	20	38.8	9	41.2	8	45.5	283	34.4
Stores paying salary to manager.....	52	43.4	18	43.1	16	36.4	330	45.0

NOTE.—The sum of expense percentages for the 11 separate items does not prove to be identical with the "total expense" figures given in either of the last two lines. The discrepancy is accounted for by the fact that the separate figures were arrived at independently and with a varying number of stores. Also, interest charges have not been included separately, the reasons for which are explained in the preceding text. In some instances interest was included in the "total expense" figures.

## NET PROFIT OR LOSS

It is obviously interesting to compare percentage figures for average total expense and average gross margin of profit in order to determine the general situation concerning net profit or net loss in the operation of the stores reporting in this survey. One very evident difficulty arises in reaching a valid conclusion by basing such a comparison on the figures already presented in this report—namely, that some stores paid a salary to the proprietor, while others did not. In the first instance it is conceivable that many stores would be operating apparently at a loss, but actually at a considerable profit because of an unduly large amount charged off as salary for the owner or proprietor. Conversely, other stores, not paying a regular salary to the owner or proprietor, might seem to be realizing a considerable net profit, whereas, in reality, the profits might not be sufficient to reimburse the owner even for the actual time and labor spent in conducting the business.

It would not be proper, from a statistical point of view, to compare the two figures for total expense (34.4 and 45 per cent), as already given for these two classes of stores, with the average gross margin figure (42.9 per cent), which was arrived at irrespective of the two classes. On that account a special study was made to secure separate gross margin figures for the two classes of stores.

The figures for the two groups were taken from the reports of the 281 stores for which gross margin figures were given earlier in the report, as found on page 38. The stores were about equally divided between those which paid a salary to the owner or proprietor and those which did not. The average gross margin was found to be 43.2 per cent in stores paying a salary to the owner or proprietor and 41.9 per cent in stores not paying a salary to the owner or proprietor.

By reference to the figures for total expense it will be found that, on the average, the stores which paid a definite salary to the proprietor in 1929 operated at a net loss of 1.8 per cent and those not paying salaries to proprietors an average apparent net profit of 7.5 per cent. The latter does not represent true net profit, however, since no allowance was made for the payment of a salary or wage to the owner or proprietor for his own time and labor in the conduct of the business.



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